

**DRAFT  
INITIAL STUDY/MITIGATED  
NEGATIVE DECLARATION  
WILLOW STREET BRIDGE REPLACEMENT  
PROJECT**

**IS-10-006**

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## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
<b>1 INTRODUCTION.....</b>	<b>1-1</b>
1.1 Introduction and Regulatory Guidance.....	1-1
1.2 Why This Document? .....	1-1
1.3 Summary of Findings.....	1-1
1.4 Environmental Documents and Permits.....	1-2
1.5 Document Organization .....	1-2
<b>2 PROJECT DESCRIPTION .....</b>	<b>2-1</b>
2.1 Project Location .....	2-1
2.2 Background and Need for the Proposed Project.....	2-1
2.3 Description of Proposed Project .....	2-4
<b>3 ENVIRONMENTAL CHECKLIST .....</b>	<b>3-1</b>
3.1 Aesthetics.....	3-1
3.2 Agricultural Resources.....	3-19
3.3 Air Quality .....	3-21
3.4 Biological Resources .....	3-36
3.5 Cultural and Paleontological Resources .....	3-72
3.6 Geology and Soils.....	3-74
3.7 Hazards and Hazardous Materials .....	3-79
3.8 Hydrology and Water Quality.....	3-86
3.9 Land Use and Planning .....	3-90
3.10 Mineral Resources .....	3-98
3.11 Noise .....	3-99
3.12 Population and Housing.....	3-117
3.13 Public Services.....	3-119
3.14 Recreation .....	3-125
3.15 Transportation/Traffic.....	3-126
3.16 Utilities and Service Systems.....	3-153
3.17 City Threshold Standards.....	3-156
3.18 Mandatory Findings of Significance.....	3-161
<b>4 REFERENCES.....</b>	<b>4-1</b>
<b>5 LIST OF PREPARERS.....</b>	<b>5-1</b>
<b>6 SUMMARY AND SIGNATURE PAGE.....</b>	<b>6-1</b>

## APPENDIX A. Mitigation Monitoring and Reporting Program

### LIST OF FIGURES

<b><u>Figure</u></b>	<b><u>Page</u></b>
2.1-1 Regional Map.....	2-2
2.1-2 Project Location Map.....	2-3
2.1-3 Project Design and Footprint.....	2-5
3.1-1 Visual Simulation 1 View Northwest along Willow St. from Trail.....	3-9
3.1-2 Visual Simulation 2 View Southeast near Valley Vista Road.....	3-11
3.1-3 Visual Simulation 3 View Northwest from Near Bonita Road.....	3-13
3.4-1 Habitats within the PIA for the Willow Street Bridge Project.....	3-39
3.4-2 Permanent and Temporary Impacts to Sensitive Habitats Resulting from the Willow Street Bridge Project.....	3-48
3.4-3 Existing Operational Noise Contours and Construction Noise Contours.....	3-49
3.4-4 Existing and Anticipated Operational Noise Contours.....	3-51
3.9-1 Existing Land Use.....	3-91
3.11-1a Noise Measurement and Receiver Locations (1 of 3).....	3-101
3.11-1b Noise Measurement and Receiver Locations (2 of 3).....	3-103
3.11-1c Noise Measurement and Receiver Locations (3 of 3).....	3-105
3.13-1 Sweetwater Regional Park.....	3-121
3.15-1 Existing Peak-Hour Intersection Volumes.....	3-130
3.15-2 Existing ADT Volumes.....	3-131
3.15-3 Near-Term Peak-Hour Intersection Volumes.....	3-137
3.15-4 Near-Term ADT Volumes.....	3-139
3.15-5 Build-Out Peak-Hour Intersection Volumes.....	3-143
3.15-6 Build-Out ADT Volumes.....	3-145



## LIST OF TABLES

<b><u>Table</u></b>	<b><u>Page</u></b>
3.1-1	Summary of Viewer Groups ..... 3-6
3.3-1	National and California Ambient Air Quality Standards..... 3-23
3.3-2	Project Area Attainment Status..... 3-24
3.3-3	SCAQMD Air Quality Significance Thresholds ..... 3-27
3.3-4	Estimated Maximum Daily Regional Construction Emissions ..... 3-29
3.4-1	Summary of Types and Amounts of Impacts to Sensitive Natural Communities and Mitigation Required..... 3-47
3.4-2	Summary of Types and Amounts of Jurisdictional Wetlands and Waters of the U.S., Projected Impacts, and Mitigation Required ..... 3-63
3.11-1	Noise Receivers ..... 3-101
3.11-2	Summary of LT-1 ..... 3-107
3.11-3	Short-Term Noise Measurement Summary ..... 3-108
3.11-4	Loudest Hour Noise Level Model Verification ..... 3-109
3.11-5	San Diego County Code Section 36.410, Maximum Sound Level (Impulsive) Measured at Occupied Property in Decibels (dBA) for Public Road Projects ..... 3-111
3.11-6	Predicted Traffic Noise Impacts – City of Chula Vista Criteria..... 3-115
3.12-1	Population Forecasts ..... 3-117
3.15-1	LOS Criteria for Signalized Intersections..... 3-128
3.15-2	Roadway Segment Capacity and LOS..... 3-129
3.15-3	Existing Peak-Hour Intersection LOS Summary..... 3-134
3.15-4	Existing Roadway Segment LOS Summary ..... 3-135
3.15-5	2012 Near-Term Conditions Peak-Hour Intersection LOS Summary ..... 3-136
3.15-6	2012 Conditions with and without Willow Street Replacement Bridge Roadway Segment LOS Summary ..... 3-141
3.15-7	2030 Build-Out Conditions Peak-Hour Intersection LOS Summary ..... 3-143
3.15-8	2030 with and without Willow Street Bridge Conditions Roadway Segment LOS Summary ..... 3-147
3.15-9	2030 Build-Out with Additional Widening Conditions Peak-Hour Intersection LOS Summary..... 3-150
3.15-10	2030 Build-Out with Additional Widening Conditions Roadway Segment LOS Summary ..... 3-151

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# **1 INTRODUCTION**

## **1.1 INTRODUCTION AND REGULATORY GUIDANCE**

The City of Chula Vista (City) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to address the potential environmental effects associated with replacing the existing Willow Street Bridge in accordance with the California Environmental Quality Act (CEQA). CEQA requires that the potential environmental effects of a project be evaluated prior to implementation. This IS/MND includes a discussion on the proposed project's effects on the existing environment, including the identification of avoidance, minimization, and mitigation measures.

## **1.2 WHY THIS DOCUMENT?**

Under CEQA, the lead agency is the public agency with primary responsibility over approval of a proposed project. The City of Chula Vista is the lead agency for the proposed Willow Street Bridge Replacement Project. The City has directed the preparation of an environmental document that complies with CEQA. The purpose of this document is to present to decision-makers and the public the potential environmental consequences of implementing the project.

## **1.3 SUMMARY OF FINDINGS**

The proposed project would avoid most temporary and permanent environmental impacts; however, some impacts resulting from the proposed construction could result. These impacts could be reduced to less-than-significant levels with the incorporation of mitigation measures. The following brief discussion lists the anticipated level of impact for each issue area.

Based on the issues evaluated in Chapter 3, it has been determined that the proposed project would have no impact to the following resource areas:

- Agricultural Resources
- Mineral Resources
- Population and Housing
- Recreation

Based on the issues evaluated in Chapter 3, the proposed project would have less-than-significant impacts related to the following issue areas:

- Geology and Soils
- Public Services
- Transportation/Traffic
- Utilities and Services System

Based on the issues evaluated in Chapter 3, the proposed project would have less-than-significant impacts related to the following issue areas, after incorporating mitigation measures:

- Aesthetics
- Air Quality
- Biological Services
- Cultural and Paleontological Services
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise

#### **1.4 ENVIRONMENTAL DOCUMENTS AND PERMITS**

The proposed project will require the following documents and permits:

**Section 7 of the Endangered Species Act – (Protection of Threatened and Endangered Species)** – Concurrence by the U.S. Fish and Wildlife Service (USFWS) that the proposed project “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of the habitat of such species.”

**Section 401 of the Clean Water Act** – Certification by the Regional Water Quality Control Board (RWQCB) that the proposed project would not discharge to receiving waters or would successfully mitigate all discharges into potential receiving waters.

**Section 404 of the Clean Water Act – (Protection of Wetlands and Waters of the U.S.)** – Certification by the Army Corps of Engineers (ACOE) that the proposed project would not result in the permanent or temporary losses of waters of the U.S. or that the City would successfully mitigate all permanent or temporary losses of waters of the U.S.

**Section 1602 of the California Department of Fish and Game Code – (Lake and Streambed Alterations)** – Certification by the California Department of Fish and Game (CDFG) that the proposed project would not substantially divert or obstruct the natural flow or changes the bed, channel, or bank of any river, stream, or lake or that these changes would be mitigated.

#### **1.5 DOCUMENT ORGANIZATION**

This IS/MND is organized as follows:

**Chapter 1 – Introduction.** This chapter provides an introduction to the environmental review process. It describes the purpose and organization of this document and presents a summary of findings.

**Chapter 2 – Project Description.** This chapter describes the proposed project, identifies project objectives, and provides a summary of the design features and mitigation measures.

**Chapter 3 – Environmental Checklist.** This chapter presents a detailed analysis on a range of environmental issues identified in the CEQA Initial Study Checklist. From this analysis, determinations for each issue and the corresponding range of impacts that would result are presented. The range of impacts includes no impact, less-than-significant impact, less-than-significant impact with mitigation incorporated, or a potentially significant impact.

**Chapter 4 – References.** This chapter lists the references used in preparation of this IS/MND.

**Chapter 5 – List of Preparers.** This chapter identifies preparers of this IS/MND.

**Chapter 6 – Distribution List.** This chapter provides the names and addresses of all parties who received copies of this document.

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## **2 PROJECT DESCRIPTION**

### **2.1 PROJECT LOCATION**

The proposed project is located within the City of Chula Vista adjacent to the City's western boundary with the County of San Diego (Figures 2.1-1 and 2.1-2). An encroachment permit needed for the proposed project would extend into land under the jurisdiction of the County of San Diego. The proposed project would replace the existing two-lane Willow Street Bridge (Bridge No. 57C-0011) with a four-lane bridge. The Willow Street Bridge traverses the Lower Sweetwater River in Chula Vista, California, and is considered a local city street not within the California Department of Transportation's (Caltrans') operating right-of-way (ROW).

### **2.2 BACKGROUND AND NEED FOR THE PROPOSED PROJECT**

The proposed project has been developed to meet the following needs:

- To provide standard traffic lane widths along the bridge
- To provide standard shoulders (bike lanes) along the bridge
- To provide an Americans with Disabilities Act (ADA)-compliant sidewalk along both sides of the bridge
- To provide standard bridge railings/barriers
- To provide standard guardrail approach transitions

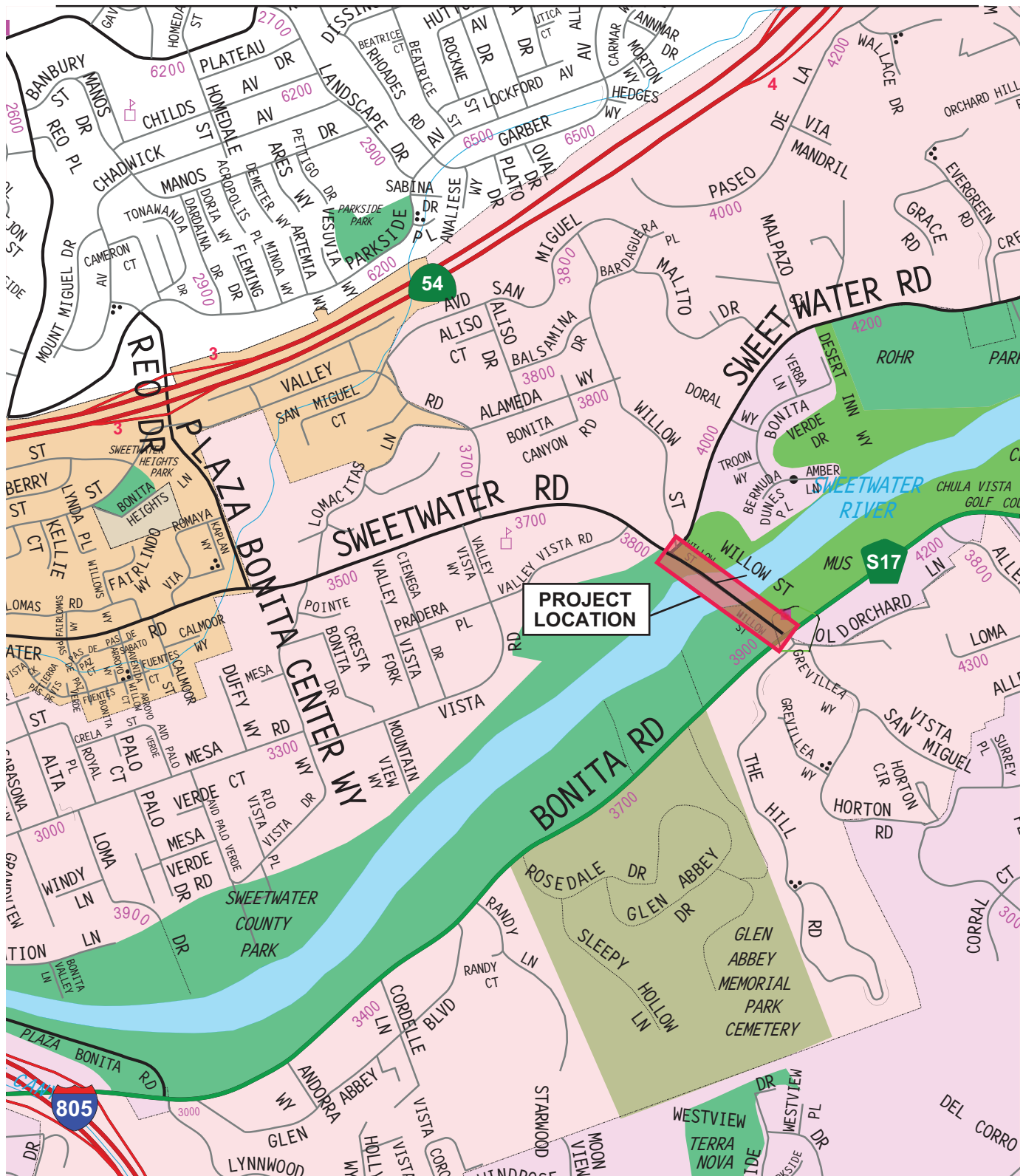
The proposed project has also been developed to eliminate the current Caltrans classification of the Willow Street Bridge as being functionally obsolete based on the major bridge deficiencies primarily related to deck geometry and bridge railings and to increase the present Sufficiency Ratings (SR) of 65.4 to above 80. The SR is based on Federal Highway Administration (FHWA) guidelines and includes numerous criteria used to evaluate the overall adequacy of the bridge that include, but are not limited to, items such as age and service, geometric data, navigation data, condition, and load rating and posting. Implementation of the proposed project would eliminate the functionally obsolete classification for the Willow Street Bridge, and the SR would be increased to above 80. It would also provide a new bridge with a 75-year life expectancy and would meet current American Association of State Highway and Transportation Officials and Caltrans design standards for vehicular and seismic loading.

Finally, traffic modeling developed for the proposed project indicates that the existing Willow Street Bridge has a level of service (LOS) F rating, which is below the acceptable thresholds of LOS C for the City and LOS D for the County of San Diego. Traffic modeling for future conditions indicates that the existing Willow Street Bridge would continue to operate at LOS F in the future. Implementation of the proposed project would improve LOS along Willow Street from LOS F to LOS B in 2012 and LOS D in 2030. While LOS D in 2030 is not consistent with the City's standard of LOS C, these changes in projected LOS would represent a measurable



**Figure 2.1-1  
Regional Map**





### Figure 2.1-2 Project Location Map

improvement in traffic conditions for the horizon year. Furthermore, the City accepts LOS D an acceptable level of service if the intersection is functional.

### **2.3 DESCRIPTION OF PROPOSED PROJECT**

The City proposes to replace the existing two-lane Willow Street Bridge (Bridge No. 57C-0011) with a four-lane bridge. The Willow Street Bridge traverses the Lower Sweetwater River in Chula Vista, California, and is considered a local city street not within Caltrans' operating ROW. The existing bridge, built in 1940, connects Bonita Road and Sweetwater Road east of Interstate 805 (I-805). The existing bridge has been determined to be functionally obsolete by Caltrans with the major deficiencies related to bridge deck geometry, bridge railings, and guardrail approach transitions. Additionally, the existing bridge does not accommodate Class II bike lanes or a standard-width sidewalk.

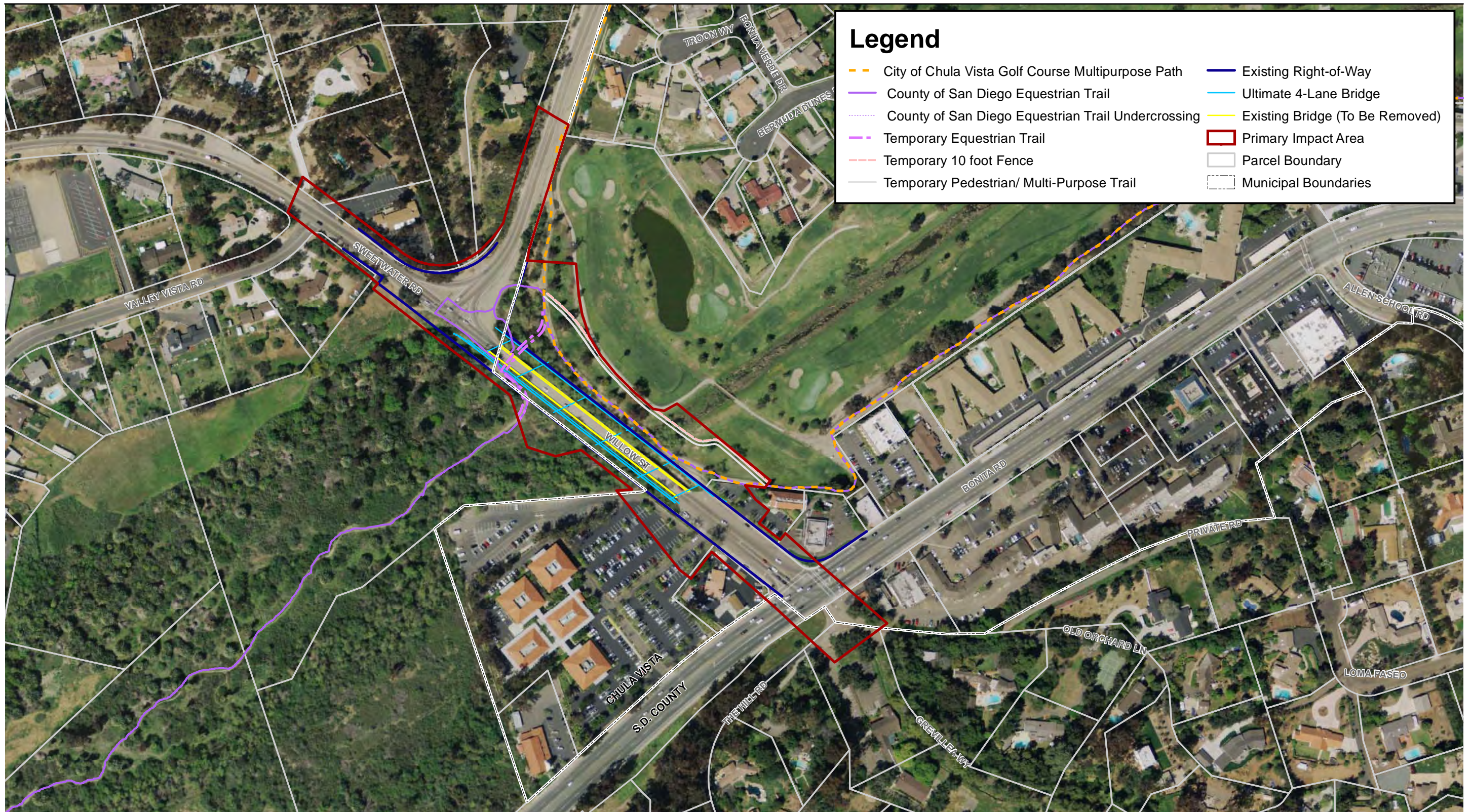
The proposed project would consist of the construction of a new four-lane bridge with shoulders and ADA-compliant sidewalks and extension of Class II Bike Lanes (Figure 2.1-3). The superstructure would have a variable depth, ranging between 3.5 to 5 feet, and an overall width of 80 feet. The cross-section of the proposed bridge would include the following:

- One 12-foot northbound thru lane
- One 12-foot southbound thru lane
- One 12-foot dedicated northbound right-turn-lane
- One 12-foot dedicated southbound right-turn-lane
- Two 8-foot bike lanes (Class II)/shoulders
- Two 5-foot sidewalks
- One 4-foot median
- Bridge railings

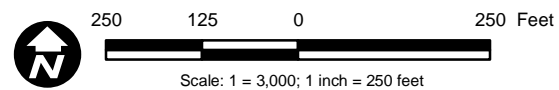
Roadway construction improvements for the proposed project would terminate in the southerly direction along Willow Street at Bonita Road, at Valley Vista Road along the northerly segment of Sweetwater Road, and approximately 600 feet along the easterly segment of Sweetwater Road. Proposed improvements also include complete pavement reconstruction, curbs and gutters, sidewalks, new approach guard railings, reconstructed drainage facilities, and signing and striping as needed. The existing traffic signal at the intersection of Willow Street with Sweetwater Road would be replaced to accommodate the new street geometry, and the entire intersection would be reconstructed to meet current standards. Additionally, the proposed project would provide roadway and traffic signal construction improvements to match existing improvements along Willow Street south of the bridge and along the two segments of Sweetwater Road located north and east of the bridge.

An equestrian trail exists on both the western and eastern sides of the existing bridge with an at-grade crossing near Sweetwater Road and an undercrossing beneath the north end of the bridge. The proposed project includes the continuation of these trails with both an at-grade crossing and





Source: Simon Wong 2010; SanGIS 2010; DigitalGlobe 2008



## Willow Street Bridge Replacement Project IS/MND

Path: P:\2004\04080084 Willow Street Bridge\5GIS\Mxd\CIA\_Figures\Figure3\_Project\_footprint.mxd, 02/10/11, Sorensen.J

## Legend

- |  |                                 |
|--|---------------------------------|
| City of Chula Vista Golf Course Multipurpose Path  | Existing Right-of-Way           |
| County of San Diego Equestrian Trail               | Ultimate 4-Lane Bridge          |
| County of San Diego Equestrian Trail Undercrossing | Existing Bridge (To Be Removed) |
| Temporary Equestrian Trail                         | Primary Impact Area             |
| Temporary 10 foot Fence                            | Parcel Boundary                 |
| Temporary Pedestrian/ Multi-Purpose Trail          | Municipal Boundaries            |

**Figure 2.1-3**  
**Project Design and Footprint**



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undercrossing being incorporated; the undercrossing would meet minimum vertical clearance requirements.

An existing 36-inch water line owned and operated by the Sweetwater Authority and an existing 32-inch water line owned and operated by the City of San Diego crossing under the northwestern spans of the existing Willow Street Bridge would need to be relocated. These two water lines would need to be relocated because they would interfere with the new bridge abutments, would be inaccessible for maintenance once the new bridge is complete, and currently are not at an adequate depth in the ground.

Construction of the proposed project is anticipated to last approximately 27 months and would be conducted in stages in order to maintain vehicle access during construction. Phase 1 of construction would consist of relocating the existing water lines over the course of approximately 3 months. Phase 2 would consist of constructing the eastern portion of the replacement bridge over the course of approximately 12 months. Phase 3 would consist of transferring traffic onto the newly completed eastern portion of the replacement bridge, demolishing the existing bridge, and constructing the western portion of the replacement bridge over the course of approximately 12 months.

Temporary construction access would be required for bridge construction. The construction would require an encroachment agreement with the County of San Diego and temporary construction easements on land within the county of San Diego and City. Within the City, construction of the replacement bridge would require a temporary construction easement of approximately 1.8 acres that would extend into the westernmost portion of the Chula Vista Municipal Golf Course. This temporary construction easement is needed to allow for construction access, staging, and storage of construction materials during construction of the bridge within the existing ROW. The temporary construction easement would not affect any of the holes on the golf course. However, the easement would require that the existing multipurpose path adjacent and parallel to the east side of the Willow Street Bridge be temporarily realigned 20 to 30 feet east of its original location and inside the City Municipal Golf Course. This realigned path would have a 10-foot-high chain-link fence with netting adjacent to the golf course side of the path to prevent errant golf balls from striking people using the realigned multipurpose path.

However, the original multipurpose path would be restored to its original location and the contractor would vacate the Chula Vista Municipal Golf Course, removing all construction equipment and other materials once construction of the proposed project is complete. No new permanent ROW is required for the proposed project. Willow Street would remain open with one lane of traffic in each direction throughout the construction process. Although the easterly edge of the new deck would be located at the ROW line, the adjacent property is owned by the City and can be used for maintenance access.

The total cost of the proposed project was estimated at approximately \$17,057,400 in June 2009, which includes \$2,275,100 for the Preliminary Engineering Phase; \$300,000 for the ROW Phase;

\$900,000 for Construction Support; and \$13,582,300 for Construction Costs. It is anticipated that the federal funding sources for this project would include, but would not be limited to, federal Highway Bridge Program funds and federal Highway Bridge Replacement and Rehabilitation (HBRR) funds in the amount of \$14,906,900. The local funds for the project would include RTCIP (TDIF) and other local sources to account for the remaining balance of \$2,150,500.

### 3 ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
<b>3.1</b>	<b>AESTHETICS.</b> Would the project:				
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## ENVIRONMENTAL SETTING

### Project Setting

The proposed project is located within the City of Chula Vista and in unincorporated San Diego County approximately 7 miles inland from the coastline. The regional landscape of coastal San Diego County is characterized by gently sloping marine terraces that have been subsequently eroded and dissected to expose Tertiary sedimentary rocks and Quaternary marine sediments. The dissected terrace edges are moderately steep to steep. The majority of the area is semi-urban in nature and many of the homes in the area contain extensive amounts of nonnative vegetation. Some areas in the vicinity with extreme slopes contain native scrub habitat, but for the most part native vegetation is isolated in the riparian areas surrounding the river.

The proposed project is located within the Sweetwater Valley at approximately 70 feet above mean sea level. The Sweetwater River has cut through quaternary marine and river terraces to form the valley in the project vicinity. This valley trends from the northeast to the southwest and is bounded by rolling hills offset from the valley. The rolling hills are what remain of these terraces. North of Willow Street, the land rises abruptly to approximately 240 feet. To the south, the hills begin to rise at a greater distance from the existing bridge but are higher in elevation than the hills to the north at approximately 430 feet.

Roughly half (600 feet) of the total length (1,200 feet) of Willow Street currently consists of a two-lane bridge that crosses over the lower portion of the Sweetwater River. The downstream

portion (southwest) of the Sweetwater River adjacent to the bridge is wooded riparian open space in the County's Sweetwater Regional Park. The upstream portion of the bridge consists of the Chula Vista Municipal Golf Course, which is mostly devoid of riparian vegetation except for a wooded strip that runs parallel to the current bridge. This wooded riparian strip begins approximately 20 feet away from the southeastern side of the bridge and gradually arcs wider to approximately 120 feet as it follows an existing multipurpose trail in a northeastern direction. The riparian strip then gradually narrows as the multipurpose trail converges with Sweetwater Road. The largest riparian trees within the river valley are downstream; the trees immediately upstream from the bridge are smaller but denser. This creates a vegetated corridor effect for drivers using the bridge as the dense trees grow close to the bridge on the northeast side. The tapered ends and thick middle of the wooded area northeast of the existing bridge would resemble a boomerang shape if viewed from above.

## **Project Viewshed**

The analysis of potential impacts to aesthetic resources began with the development of a theoretical viewshed for the existing bridge. Viewsheds are those areas that have at least partially unobstructed views of the project elements. The limits of the theoretical viewshed were limited to a 1-mile radius surrounding the proposed project and utilized aerial photographs, U.S. Geological Survey topographic maps, and computer viewshed methodologies. This analysis is considered a theoretical limit since it only takes into account the position of the viewer, the location of the element being viewed, and the intervening topography. It does not analyze the effects of buildings, trees, and other structures that can severely limit the visibility of elements. It also does not take into account the effects of distance on the visibility of these elements. It does, however, represent the worst-case visibility of any particular project element. In reality, intervening uses, structures, and plant materials, as well as distance, can affect the overall adversity of visual impacts.

Some increase in visibility of the replacement bridge would be expected since the proposed bridge is slightly higher in elevation and wider than the existing bridge. However, only a few locations that cannot currently see the bridge may be able to see the expanded and slightly taller replacement bridge. Therefore, for all practical purposes, the viewsheds would be the same for the replacement bridge as they are for the current bridge.

## **Methodology**

### Identify Visual Character

Visual character is a descriptive and nonevaluative assessment of the project area and surrounding areas. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. If there is public preference for the established visual character of a regional landscape and resistance to a project that would contrast that character, then changes in the visual character can be evaluated.



### Assess Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the viewshed. The FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach is particularly useful in highway planning because it does not presume that a highway project is necessarily an eyesore. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of a project. The three criteria for evaluating visual quality can be defined as follows:

- Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.
- Intactness is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual man-made components in the landscape.

### **Existing Visual Resources**

The dominant visual resources found on or near the proposed project site consist of large mature native and nonnative trees, views of open or flowing water, and the aesthetics of the adjacent golf course. The existing bridge itself has a rustic or rural characteristic, mostly determined by the open wood railing system along its edge. The overall structure of the bridge is not seen by many viewers, except equestrian and pedestrian users of the trail associated with the Sweetwater Regional Park that has an at-grade crossing and undercrossing at the existing bridge. The aesthetics of the column support or the bridge structure (excluding the railing system) are not considered to be a visual resource. However, the open railing along the edge of the bridge would be considered a visual resource as seen by users on the adjacent trail, as well as drivers and cyclists on Willow Street.

A variety of native and nonnative trees exist along each side of the bridge. Many of these trees are likely to be removed to accommodate the expansion and the phased construction of the bridge. These trees identify the riparian corridor and create a unique sense of enclosure that most other bridges in the area do not provide. The enclosure creates a gateway for drivers, walkers, and cyclists to pass through, enhancing their experience and the connection with the natural areas of this valley.

### Landscape Units

An area that has a definable boundary with unified character is defined as a visual character unit. Each unit can be classified as having a particular visual quality that results in a common visual

experience and sensitivity to change. The Visual Impact Assessment (VIA) prepared for the proposed project identified 10 landscape units, described below.

Golf Course Landscape Unit: This landscape unit consists of the Chula Vista Municipal Golf Course that is located adjacent to the project area. The visual quality of the area is high as it provides a highly manicured and landscaped zone and can be seen by automobile users traveling northbound across the bridge, users of the regional trail that borders the golf course, and golf course users themselves. After the proposed project is finished, users of the bridge going in either direction would be able to see the golf course, and conversely users of the golf course would be able to see those using the replacement bridge.

Golf Course Residential Landscape Unit: This landscape unit consists of residential development located north of, and adjacent to, the Chula Vista Municipal Golf Course. This residential development consists of single-family homes on half-acre lots, the majority of which are single-story. This residential development has a moderate to high visual quality because the homes are well maintained with mature landscaping and the area in general is of high visual quality.

Hospital Landscape Unit: This landscape unit consists of the two-story Kaiser Permanente hospital facility southwest of the project area. The complex consists of six two-story buildings of approximately 9,000 square feet each. The hospital facility is separated from Willow Street by the parking lot for the hospital, which contains many planted trees approximately 20 feet tall. The hospital complex is not visually prominent. The buildings themselves are neat but are tucked away from the project area and screened by planted trees located in the surface parking area. The surface parking lot close to the project area is the most notable feature of the landscape unit.

Northeast Residential Landscape Unit: This landscape unit consists of residential development northeast of the project area and Sweetwater Road. The majority of these residential units are built on 1-acre lots and are on rolling hills that are heavily vegetated with mature eucalyptus trees, while some portions of this landscape unit are vegetated with other types of mature trees. Overall, this residential area is of moderate visual quality. The corner of this landscape unit closest to the project area is composed of dense eucalyptus trees that neither detract nor enhance the aesthetic qualities of the landscape unit.

Northwest Residential Landscape Unit: This landscape unit consists of residential development northwest of the project area and Sweetwater Road with an abundance of mature pepper trees along Sweetwater Road and riparian trees close to the river. This vegetation acts as a barrier between this landscape unit and the project area. The residential homes within this landscape unit consist of custom single-family homes with one-story homes on one-acre lots. This residential area is closer to the river at a lower elevation than the northeast residential unit and is screened by mature nonnative vegetation.

Regional Trail Corridor Landscape Unit: This landscape unit consists of the multipurpose trail associated with the Chula Vista Municipal Golf Course immediately adjacent to the existing bridge. The trail runs alongside Sweetwater Road, turns south parallel to Willow Street Bridge,

then turns northeast, parallel to both Bonita Road and the Sweetwater River along the edge of the golf course. Between this trail and the Willow Street Bridge lies a dense stand of riparian trees. Currently, this stand of vegetation acts as a barrier between the northern two-thirds of the existing bridge and the trail. The regional trail corridor landscape unit is of high visual quality, is located in the river valley within the dense riparian vegetation, and is adjacent to the Municipal Golf Course and the Willow Street Bridge.

South Residential Landscape Unit: This landscape unit consists of residential development south of the proposed project. These residential units are on hills that rise above the valley in a more gradual manner but are higher in elevation than the hills to the north. These single-family residences have been built on lots ranging from 0.5 to 2.5 acres. As in the northern residential landscape units, many mature, nonnative trees are interspersed throughout the area, especially along the southern edge of Bonita Road. Large stands of eucalyptus line Bonita Road at the lowest point of this landscape unit.

Strip Commercial Landscape Unit: This landscape unit consists of single-story commercial and office space structures located along Bonita Road. This urban commercial zone is dominated by Bonita Road, which is a high-volume four-lane roadway. The structures in this landscape unit are set back from the road and have surface parking between the structure and street. Despite the presence of sidewalks, this area is not a walkable, pedestrian-friendly, aesthetic urban environment due to the noise, speed, and quantity of cars and the lack of engaging storefront architecture. This is a low-quality visual unit.

Transportation Corridor Landscape Unit: This landscape unit consists of Willow Street and Sweetwater Road north of Willow Street. These roads are predominately two-lane asphalt roads (one lane in each direction) with turn lanes at the intersections of Willow Street and Bonita Road, and of Willow Street and Sweetwater Road. The existing bridge is concrete, and its rails and posts are white-painted wood. The visual quality of the transportation corridor landscape unit relates more to the elements within or next to the unit. Like the strip commercial landscape unit, the lower part of Willow Street is a high traffic area with low aesthetic qualities. The upper part of Willow Street boasts quality views of the municipal golf course and riparian area. The conflicting qualities of the constituent pieces make this a moderate quality landscape unit.

Wooded Riparian Landscape Unit: This landscape unit consists of wooded riparian trees within the Sweetwater Regional Park southwest of the project area at the bottom of the Sweetwater River Valley. A trail associated with the Sweetwater Regional Park parallels the north side of the Sweetwater River and crosses the existing Willow Street Bridge with an at-grade crossing and undercrossing. This landscape unit is of high quality, is generally intact, and is natural in its visual character.

### Viewer Groups

Six viewer groups were considered for the evaluation of viewer exposure and viewer awareness as shown in Table 3.1-1.

**Table 3.1-1  
Summary of Viewer Groups**

<b>Viewer Group</b>	<b>Viewing Duration</b>	<b>Quantity of Viewers</b>	<b>Sensitivity of Viewers to Change</b>
Adjacent Residents	Long	Low	High
Distant Residents	Long	Medium	Moderate
Local Street Drivers, Cyclists, and Pedestrians	Very Short	High	Moderate
Golfers	Moderate	Low	Moderate
Trail Users	Short	Medium	High
Adjacent Office or Retail Workers and Visitors	Moderate	Medium	Low

**Adjacent Residents:** This viewer group consists of residents in proximity to the project residing in the residential golf course landscape unit that borders the golf course. Residents adjacent to the course with direct views of the bridge would have the greatest potential visibility of the site, as construction would be visible all day and at a close distance. The quantity of viewers in this group is low, most likely fewer than 12 households. Viewers in this group would be very aware of the project because of its proximity.

**Distant Residents:** This viewer group consists of residents in the northeast, northwest, and south residential landscape units whose views are obstructed by mature vegetation. Distant residents include those whose views are obstructed by mature vegetation residing in the northeast, northwest, and south residential landscape units. These residents may be able to see portions of the site, but their views of the project are partially or fully obscured by mature vegetation, buildings, or landforms. If they can see portions of the site, their duration of view would potentially be all day. These views, already partially obstructed by vegetation, landforms, and buildings, would leave residents unaware of the project. The exception to this would be the few (if any) instances where resident views are unobstructed by existing vegetation.

**Local Street Drivers, Cyclists, and Pedestrians:** This viewer group consists of individuals driving on Willow Street and using adjacent sidewalks and bike lanes near the project. This group has the highest number of potential viewers even if the group would be observing the site for a short time as they pass through the 1,200-foot transportation corridor. Viewers in this group would be aware of the changes to the current bridge and construction of the project as it progressed.

**Golfers:** This viewer group consists of users of the Chula Vista Municipal Golf Course. The proximity of the site can be compared to the residents in the residential golf course landscape unit. Unlike the residents, the golfers' view of the project is temporary, lasting only as long as it takes them to play through the holes adjacent to the proposed project. Users of the Chula Vista Municipal Golf Course would be aware of the project due to its proximity to the course.

**Trail Users:** This viewer group consists of pedestrians, cyclists, and equestrian users of the regional trail network. Their viewing duration would be relatively short, limited to the time it

takes to pass the proposed construction area. The viewing duration would be shorter than that of the golfers but longer than that of road users on the bridge deck. Trail users would be aware of the construction as it was taking place. Also, regular users of the trail would also notice the multipurpose path being relocated from its current alignment as construction progresses.

Adjacent Office or Retail Workers/Patrons: This viewer group consists of workers and patrons of the shops, offices, and medical facilities on Bonita Road in the Strip Commercial Landscape Unit and Hospital Complex Landscape Unit. The duration for this group is low for patrons of the businesses, but long for those who are workers. The orientation of the Strip Commercial Landscape Unit is toward the Sweetwater River and golf course and not to the bridge. People inside the outpatient complex would be inside the buildings. The views from these buildings are obscured by parking lot trees. This group is not likely to be aware of the bridge construction due to the orientation and the obstructions that interfere with views.

## **Key Views**

The VIA identified 14 candidate key views, which were narrowed down to three key views that were recommended for the production of the visual simulations. The three selected key views were then used in visual simulations to depict the existing conditions and predict the postconstruction visual environment. These three selected key views are described below.

### Key View 2

Key View 2 looks northwest to the existing bridge from the multipurpose path associated with the Chula Vista Municipal Golf Course and is 45 feet northeast of the existing bridge. This key view is depicted in Figure 3.1-1 and is representative of what users would see from the multipurpose path. The dominant landscape feature is the Willow Street Bridge in the foreground. The visual quality for this key view is high. The visual unity is discontinuous due to the bridge bisecting the river valley and riparian vegetation. Despite the discontinuous nature of the intersection of natural and built features, the scene remains intact because the vegetation is mature and allows the bridge to disappear within it, almost as if the bridge was part of the natural landscape. Also the railing of the existing bridge allows the viewer to see through it more readily. The natural landscape seen through portions of the bridge railing helps it blend with the background. The vividness of the view is memorable due to the linear intersection of the existing bridge with the natural vegetation mass.

### Key View 3

Key View 3 looks southeast to the bridge along Sweetwater Road from the Transportation Corridor landscape unit and is located 430 feet northwest of the existing bridge. This key view is depicted in Figure 3.1-2. This key view is representative of what drivers would see traveling southeast as they approach the bridge. The proposed project elements would be visible in the foreground and middleground. The dominant landscape feature from this viewpoint is the vegetation found in the middleground. The visual quality for this key view is moderate. The view

remains somewhat intact as the vegetation lines the edge of the transportation corridor, but the intactness of the view is interrupted by the bridge itself as the road shoulders are replaced with bridge railing. The vividness of the view is memorable due to the elevated roadway going through a tunnel effect of mature vegetation that represents a creek crossing.

#### Key View 4

Key View 4 looks northwest to the bridge along Willow Street along the Transportation Corridor landscape unit and is located 210 feet southeast of the existing bridge. This key view is depicted in Figure 3.1-3. This key view is representative of what drivers would see traveling northwest as they approach the bridge. The proposed project elements would be visible in the middleground and foreground. The dominant landscape character feature is the Willow Street road surface in the foreground. The existing visual quality for this key view ranges from low to moderate. The visual unity is discontinuous, marked by the abrupt transition of urban environment to natural environment of the riparian vegetation at the bridge. The view is not intact due to this somewhat abrupt change from urban to natural environment although the presence of the bridge does serve to make the transition a little less drastic. The vividness of the view is memorable due to the elevated roadway going through a tunnel effect of mature vegetation that clearly represents a river crossing point.

#### **Method of Assessing Project Impacts**

The visual impacts resulting from the proposed project are determined by assessing changes to the visual resource and predicting viewer response to that change. Visual resource change results from changes in visual character and visual quality. The first step in determining visual resource change is to assess the compatibility of the proposed project's visually prominent elements with the visual character of the existing visual setting. This can only be done accurately with the use of visual simulations that show the project elements within the context of the local visual setting. The viewer response to project change is the sum of viewer exposure, viewing duration, and viewer sensitivity to changes in the visual environment. Viewer exposure identifies who can see the project, how far away they are, and how much of the project can be seen by the viewers. Viewer duration is determined by the total number of persons seeing the project elements and the length of time that they are exposed to these views. Viewer sensitivity is determined by subjective elements such as a person's understanding of the local visual environment, personal experiences, and objective elements such as the aesthetic organization of the proposed element and the amount of contrast it has with the local visual environment.

The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to oppose the change.

#### Definition of Visual Impact Levels

None or Not Applicable: No adverse change to the existing visual resource is expected to be noticeable, or the change may be considered an overall improvement to the visual environment. Does not require mitigation.



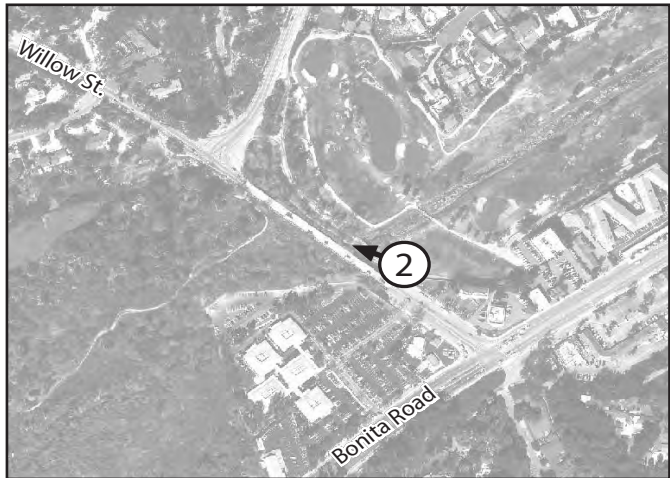


Proposed Conditions\* (Selected railing Type ST-40 Concrete Barrier)



Existing Conditions

\* Simulation Notes:  
These simulations represent approximate renderings of project elements based on currently available information from engineering plans.



Key View Photograph Location

Visual Setting Information

Project Elements Seen	1, 3, 5
Primary Viewer Group	D, E

Existing Key View Quality Assessment	Existing		
	High	Moderate	Low
Visibility			
Quantity of Viewers			✓
Viewer Sensitivity	✓		
Visual Element Quality			
Form		✓	
Line		✓	
Color	✓		
Texture	✓		
Perceptual Quality			
Vividness		✓	
Intactness			✓
Unity		✓	

- Project Elements
- 1 Bridge Railings or Barriers
  - 2 Bridge Road, Median
  - 3 Bridge Abutment & Supports
  - 4 Light Poles & Signals
  - 5 Vegetation Removal
  - 6 Pedestrian Walkway

- Viewer Groups
- A Single-Family Residential
  - B Retail Worker
  - C Retail Customers
  - D Recreational Trail User
  - E Recreational Golfer
  - F Cyclists & Pedestrians
  - G Local Drivers
  - H Arterial Drivers

Contrast Assessment of Project Elements	Proposed		
	High Contrast	Moderate Contrast	Improves/Low Cont.
Visual Quality			
Vividness		✓	
Intactness		✓	
Unity		✓	
Visual Organization			✓
View Quality			
Viewing Scene		✓	
Viewing Sites		✓	
Viewing Corridor			✓

NA: Not Affected or Not Applicable

Figure 3.1-1  
Visual Simulation 1  
View Northwest along Willow St. from Trail

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Proposed Conditions\* (Selected railing Type ST-40 Concrete Barrier)



Existing Conditions

\* Simulation Notes:  
These simulations represent approximate renderings of project elements based on currently available information from engineering plans.



Key View Photograph Location

Visual Setting Information

Project Elements Seen	1, 2, 3, 5, 6
Primary Viewer Group	F, G, H

Existing Key View Quality Assessment	High	Moderate	Low
	Existing		
Visibility			
Quantity of Viewers	✓		
Viewer Sensitivity		✓	
Visual Element Quality			
Form		✓	
Line		✓	
Color	✓		
Texture	✓		
Perceptual Quality			
Vividness		✓	
Intactness		✓	
Unity		✓	

Contrast Assessment of Project Elements	Proposed		
	High Contrast	Moderate Contrast	Improves/Low Cont.
Visual Quality			
Vividness		✓	
Intactness		✓	
Unity		✓	
Visual Organization			✓
View Quality			
Viewing Scene		✓	
Viewing Sites		✓	
Viewing Corridor			✓

NA: Not Affected or Not Applicable

- Project Elements
- 1 Bridge Railings or Barriers
  - 2 Bridge Road, Median
  - 3 Bridge Abutment & Supports
  - 4 Light Poles & Signals
  - 5 Vegetation Removal
  - 6 Pedestrian Walkway

- Viewer Groups
- A Single-Family Residential
  - B Retail Worker
  - C Retail Customers
  - D Recreational Trail User
  - E Recreational Golfer
  - F Cyclists & Pedestrians
  - G Local Drivers
  - H Arterial Drivers

Figure 3.1-2  
Visual Simulation 2  
View Southeast near Valley Vista Road

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Proposed Conditions\* (Selected railing Type ST-40 Concrete Barrier)



Existing Conditions

\* Simulation Notes:  
These simulations represent approximate renderings of project elements based on currently available information from engineering plans.



Key View Photograph Location

Visual Setting Information

Project Elements Seen	1, 2, 3, 5, 6
Primary Viewer Group	F, G, H

Existing Key View Quality Assessment	High	Moderate	Low
	Existing		
Visibility			
Quantity of Viewers	✓		
Viewer Sensitivity		✓	
Visual Element Quality			
Form		✓	
Line		✓	
Color	✓		
Texture	✓		
Perceptual Quality			
Vividness		✓	
Intactness		✓	
Unity		✓	

- Project Elements
- 1 Bridge Railings or Barriers
  - 2 Bridge Road, Median
  - 3 Bridge Abutment & Supports
  - 4 Light Poles & Signals
  - 5 Vegetation Removal
  - 6 Pedestrian Walkway
- Viewer Groups
- A Single-Family Residential
  - B Retail Worker
  - C Retail Customers
  - D Recreational Trail User
  - E Recreational Golfer
  - F Cyclists & Pedestrians
  - G Local Drivers
  - H Arterial Drivers

Contrast Assessment of Project Elements	Proposed		
	High Contrast	Moderate Contrast	Improves/Low Cont.
Visual Quality			
Vividness		✓	
Intactness		✓	
Unity		✓	
Visual Organization			✓
View Quality			
Viewing Scene		✓	
Viewing Sites		✓	
Viewing Corridor			✓

NA: Not Affected or Not Applicable

Figure 3.1-3  
Visual Simulation 3  
View Northwest from Near Bonita Road

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Low: Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation.

Moderate: Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within 5 years using conventional practices.

Moderately High: Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required for mitigation would generally take longer than 5 years to become effective.

High: A high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid highly adverse impacts.

#### Potential Viewer Response Levels

Adjacent Residents: Those residents adjacent to the golf course with direct views of the bridge would have the greatest potential visibility of the site where the project elements would be visible all day at a close distance. The quantity of viewers in this group is low, most likely fewer than 12 households. However, because of the duration and proximity of the homes to the site, their sensitivity to project visual changes would be high.

Distant Residents: This viewer group has a larger number of potential viewers than the adjacent residents, but their views of the project are partially or fully obscured by mature vegetation, buildings, and landforms. As a result of the obstructions and distance to the site, their sensitivity to visual change is likely to be low.

Willow Street Drivers, Cyclists, and Pedestrians: This viewer group has the highest number of potential viewers, but the viewing duration of the site is short as they pass through the transportation corridor. Their views of the project would be very close views of the road, walkways, and railing. Because of the short duration, these viewers are likely to possess only a moderate concern for visual changes.

Golfers: The proximity of the site is similar to the adjacent residents lining the golf course. Unlike the residents, the golfer's view of the project is temporary, so the duration is much less, giving this viewer group only a moderate concern regarding visual changes to the environment.

Trail Users: This group's viewing duration is short, but longer than the Willow Street viewer group. The trail users' duration of view would be shorter than that of the golfers; however, their focus on recreation and open space would make them more sensitive to change, giving this user group a moderately high sensitivity to change.

Adjacent Commercial Workers/Patrons: This group is most likely focused on commercial activities, and the views of the project are either obstructed or distant, giving this group a low sensitivity to visual change.

## **DISCUSSION**

### **a) Have a substantial adverse effect on a scenic vista?**

#### **Less-than-significant Impact.**

##### Key View 2

Figure 3.1-1 depicts the proposed improvements for Key View 2. The proposed project would raise the existing bridge height and extend the width of the bridge northeast toward viewers on the multipurpose path. The increased width and height would have an effect on this view as it brings the bridge edge and traffic closer to the view from the multipurpose path. The existing visual quality associated with the existing bridge and its substructure is not high. The current level of maintenance, the extensive amounts of pier footings, the disturbance level of the creek bottom, and the presence of various utility systems attached to the bridge have all degraded the visual quality and intactness of the area. The proposed changes may actually result in a level of visual improvement because the number of support piers would be reduced, the amount of light under the bridge would increase due to the new height of the bridge, and the attached utilities would be removed.

During construction, existing vegetation would be removed, which would increase the visibility of the existing and future bridge. Removal of this vegetation would be noticeable by various viewer groups. The visual quality of the project site would likely change from its current high to low in the short term as trail users would likely have an initial negative reaction once mature trees are removed for construction. However, implementation of mitigation measure BIO-5 (see section 3.4) would revegetate the project site once construction was completed. Viewer response would likely be neutral to positive once construction was completed and the project site was revegetated.

The current character of the bridge is somewhat historic and rural in character. Use of Caltrans Type 26 barrier and railing would increase the lack of transparency along the edge of the bridge by limiting the amount of light and skyline seen through the railing, which could adversely affect the existing view of the bridge. However, implementation of mitigation measure AESTH-1 would reduce this impact to a level less than significant. The Type ST-40 railing depicted in Figure 3.1-1 would be more consistent with the existing rural character and would allow for a greater degree of visibility through the railing, especially as seen from the roadway and the trail. Overall, the resulting visual change would be moderate during construction and would be reduced to low once construction was completed. Implementation of mitigation measures BIO-5 and AESTH-1 would reduce impacts to scenic vistas to a level less than significant.

AESTH-1: Construction of the proposed project will include Type ST-40 railing depicted in Figures 3.1-1 thru 3.1-3. Type ST-40 railing would be more consistent with the existing rural character and would allow for a greater degree of visibility through the railing, especially as seen from the roadway and the trail.

### Key View 3

Figure 3.1-2 depicts the proposed improvements for Key View 3. The proposed project would raise the existing bridge height and extend the width of the bridge from two to four lanes. The increased width would be noticeable as two-lane Sweetwater Road transitions to the four-lane road section across the bridge. Implementation of the proposed project would reduce the rural character of the bridge by constructing a larger bridge with a modern design. Similarly, the proposed project would shift the dominant visual focus from the riparian vegetation to the replacement bridge. This change in visual character for viewers approaching the bridge from Sweetwater Road would range between moderate to low quality in the short term. A variety of responses from automobile drivers and passengers is likely to occur. Viewer response from this view is likely to be subjective, depending on the individual's preference for landscaped environments such as the golf course, expanded panoramas of the valley, or the existing riparian vegetation. This change in visual character for viewers approaching the bridge from Sweetwater Road would be greatest during and immediately after construction due to the removal of a major portion of the existing vegetation, giving the automobile driver an increased view of the golf course. However, implementation of mitigation measure BIO-5 (see section 3.4) would partially restore the previous view of vegetation surrounding the project site, and automobile drivers would regain a portion of the vegetated corridor they experienced before and would retain the expanded vista of the golf course and upstream views of the river as it bisects the golf course.

The current character of the bridge is somewhat historic and rural in character. Use of Caltrans Type 26 barrier and railing would result in a moderate to high adverse change to the existing visual character by introducing railings with a modern design. However, implementation of mitigation measure AESTH-1 would reduce this impact to a level less than significant. Use of Type ST-40 rail depicted in Figure 3.1-2 would provide open rail detail and increased visibility through the railing. Type ST-40 rail would be considered more rustic and less massive, and thereby would have less impact on the visual character. Overall, the resulting visual change would be moderate during construction and operation. Implementation of mitigation measures BIO-5 and AESTH-1 would reduce impacts to scenic vistas to a level less than significant.

### Key View 4

Figure 3.1-3 depicts the proposed improvements for Key View 4. The proposed project would raise the existing bridge height and extend the width of the bridge from two to four lanes and would be noticeable for frequent users of Willow Street. The southern half of the existing vegetation would be removed and would give northbound traffic an increased view of the golf course and hillsides in the background. The likely response of the project would be that of a decreased cognizance of the transition from urban to natural environments. Once the four-lane bridge is constructed, users would not notice the bottleneck on Willow Street as it narrows from



80 to 25 feet in width. Pedestrians and cyclists would have a perceived sense of safety because both sides of the replacement bridge would contain bicycle lanes and sidewalks. Most viewers would also experience an increase in the width of the bridge, which may have the effect of giving the viewer a greater perceived sense of security on the approach to Sweetwater Road traveling north on Willow Street.

The change in visual quality for viewers approaching the bridge on Willow Street traveling northwest would be moderate in the short term. However, implementation of mitigation measure BIO-5 (see section 3.4) would partially restore the previous view of vegetation surrounding the project site, and automobile drivers would regain a portion of the vegetated corridor they experienced before. The view of the project area once revegetation is completed will be of riparian vegetation combined with an expanded view of the golf course compared to the view in the existing condition.

The current character of the bridge is somewhat historic and rural in character. Use of Caltrans Type 26 barrier and railing would result in a moderate to high adverse change to the existing visual character by introducing railings with a modern design. Implementation of mitigation measure AESTH-1 would reduce this impact to a level less than significant. Use of Type ST-40 rail depicted in Figure 3.1-3 would provide open rail detail and increased visibility through the railing. Type ST-40 rail would be considered more rustic and less massive, and thereby would have less impact on the visual character. Overall, the resulting visual change would be moderate during construction and operation. Implementation of mitigation measures BIO-5 and AESTH-1 would reduce impacts to scenic vistas to a level less than significant.

**b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?**

**Less-than-significant Impact.** As described in Section 3.1a above, construction of the proposed project would require removal of mature vegetation surrounding the proposed project, which would affect viewers from all three key view locations. Removal of mature vegetation would increase the visibility of the existing and future bridge from Key View 2 and would decrease the scenic quality from the views approaching the bridge and on the bridge from Key Views 3 and 4. Additionally, use of Caltrans Type 26 barrier and railing would limit the amount of light and skyline seen through the railing. However, implementation of mitigation measures BIO-5 and AESTH-1 would reduce impacts to scenic resources from all three key views to a level less than significant.

**c) Substantially degrade the existing visual character or quality of the site and its surroundings?**

**Less-than-significant Impact.** As described in Section 3.1a above, construction of the proposed project would affect the visual character of the project site as seen by viewers from all three key view locations. The proposed project would raise the existing bridge height and bring the bridge edge and traffic closer to the view from the multipurpose path for Key View 2. Removal of



mature vegetation would increase the visibility of the existing and future bridge from Key View 2. Similarly, raising the existing bridge height and widening the bridge would change the views from the approaches to the bridge and on the bridge from Key Views 3 and 4. Removal of mature vegetation surrounding the existing bridge would also reduce the visual character of the surrounding area as viewed from Key Views 3 and 4. Use of Caltrans Type 26 barrier and railing would limit the amount of light and skyline seen through the railing and affect views from all three key views. However, implementation of mitigation measures BIO-5 and AESTH-1 would reduce impacts to existing visual character from all three key views to a level less than significant.

**d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?**

**Less-than-significant Impact with Mitigation Incorporated.** The proposed project would be constructed of concrete, asphalt, and other nonreflective materials. The existing bridge does not have street lighting and the replacement bridge does not propose new street lighting. However, should permanent or temporary indirect lighting occur as a part of the proposed project, implementation of mitigation measure BIO-10 would reduce impacts related to light and glare to a level less than significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
<b>3.2 AGRICULTURAL RESOURCES.</b> Would the project:					
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## ENVIRONMENTAL SETTING

The proposed project is located within the City of Chula Vista and unincorporated San Diego County on Willow Street between Bonita Road and Sweetwater Road. The project area is defined by the Willow Street roadway segment between Sweetwater Road and Bonita Road in Chula Vista. The existing bridge crosses over the Sweetwater River and covers a distance of approximately 1,200 feet. Land immediately surrounding the proposed project consists of recreational uses and open space. The Chula Vista Municipal Golf Course is east of the proposed project, while undeveloped land associated with the Sweetwater Regional Park is to the west. Land north and south of the proposed project consists of a mix of residential, commercial, institutional, and public facilities development. Development closest to the proposed project at the intersection of Willow Street and Bonita Road consists of commercial land uses, while single-family residential units within the project area are primarily north of Willow Street Bridge along Sweetwater Road and Valley Vista Road. Land surrounding the proposed project is not in agricultural production nor is any land designated as farmland.

## DISCUSSION

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

**No Impact.** Land surrounding the proposed project is not in agricultural production. A review of the Chula Vista–Vision 2020 and San Diego County 2020 General Plan Update land use maps and San Diego Association of Governments (SANDAG) land use mapping resources revealed that land surrounding the proposed project has not been designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance or of local importance. Therefore, the proposed project would not result in a loss of Farmland.

- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**No Impact.** As described in Section 3.2a, land surrounding the proposed project is not in agricultural production, although the Chula Vista Municipal Golf Course is zoned for agricultural uses (AD) by the City and the Sweetwater Regional Park is zoned for agricultural uses (A-70) by the County of San Diego. However, the proposed project would be constructed entirely within the existing ROW and would not result in any permanent ROW acquisitions that would affect any surrounding land uses. Although temporary construction easements would be needed on both of these properties zoned for agricultural uses, both properties would be restored to their original condition once construction was completed. Neither of these properties are protected under Williamson Act contracts. Therefore, the proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

- c) **Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?**

**No Impact.** As described in Section 3.2a, land surrounding the proposed project is not in agricultural production. Therefore, changes to the existing environment associated with the proposed project would not result in conversion of Farmland to nonagricultural use.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.3 AIR QUALITY.</b>				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## **ENVIRONMENTAL SETTING**

The project is located in the San Diego Air Basin (SDAB). The boundaries of the SDAB are contiguous with the political boundaries of San Diego County. The climate of San Diego County is characterized by warm, dry summers and mild, wet winters. One of the main determinants of the climatology is a semipermanent high-pressure area (the Pacific High) in the eastern Pacific Ocean. In the summer, the Pacific High is located well to the north, causing storm tracks to be directed north of California. The Pacific High maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation. In San Diego County, the months of heaviest precipitation are November through April. The mean temperature is 61.0 degrees Fahrenheit (°F), and the mean maximum and mean minimum temperatures are 68.5°F and 53.5°F, respectively. The Pacific High also influences the wind patterns of California. In the SDAB, the predominant wind directions are westerly and west-southwesterly during all four seasons, and the average annual wind speed is 6.1 miles per hour (WRCC 2011).

A common atmospheric condition known as a temperature inversion affects air quality in San Diego. During an inversion, air temperatures get warmer rather than cooler with increasing height. Subsidence inversions occur during the warmer months (May through October) as descending air associated with the Pacific High comes into contact with cooler marine air. The boundary between the layers of air represents a temperature inversion that traps pollutants below it. The inversion layer is approximately 2,000 feet above mean sea level (AMSL) during the months of May through October. However, during the remaining months (November through April), the temperature inversion is approximately 3,000 feet AMSL. Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality.

### **Federal and State Standards**

The federal Clean Air Act (CAA) requires the adoption of National Ambient Air Quality Standards (NAAQS) to protect public health and welfare from the effects of air pollution. The NAAQS have been updated as needed. Current standards are set for sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less (PM<sub>10</sub>), respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less (PM<sub>2.5</sub>), and lead. The California Air Resources Board (ARB) has established state standards, which are generally more stringent than the NAAQS and include standards for four additional pollutants. The federal and state standards are shown in Table 3.3-1.

**Table 3.3-1**  
**National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	National <sup>a</sup>		California <sup>b</sup>
		Primary <sup>c, d</sup>	Secondary <sup>c, e</sup>	Concentration <sup>c</sup>
Ozone	1 hour	—	Same as primary standard	0.09 ppm (180 µg/m <sup>3</sup> )
	8 hour	0.075 ppm (147 µg/m <sup>3</sup> )		0.070 ppm (137 µg/m <sup>3</sup> )
Respirable particulate matter	24 hour	150 µg/m <sup>3</sup>	Same as primary standard	50 µg/m <sup>3</sup>
	Annual arithmetic mean	—		20 µg/m <sup>3</sup>
Fine particulate matter	24 hour	35 µg/m <sup>3</sup>	Same as primary standard	No separate state standard
	Annual arithmetic mean	15 µg/m <sup>3</sup>		12 µg/m <sup>3</sup>
Carbon monoxide	8 hour	9 ppm (10 mg/m <sup>3</sup> )	None	9.0 ppm (10 mg/m <sup>3</sup> )
	1 hour	35 ppm (40 mg/m <sup>3</sup> )		20 ppm (23 mg/m <sup>3</sup> )
	8 hour (Lake Tahoe)	—	—	6 ppm (7 mg/m <sup>3</sup> )
Nitrogen dioxide	Annual arithmetic mean	0.053 ppm (100 µg/m <sup>3</sup> )	Same as primary standard	0.030 ppm (57 µg/m <sup>3</sup> )
	1 hour	0.100 ppm	None	0.18 ppm (339 µg/m <sup>3</sup> )
Sulfur dioxide	Annual arithmetic mean	0.030 ppm (80 µg/m <sup>3</sup> )	—	—
	24 hour	0.14 ppm (365 µg/m <sup>3</sup> )	—	0.04 ppm (105 µg/m <sup>3</sup> )
	3 hour	—	0.5 ppm (1,300 µg/m <sup>3</sup> )	—
	1 hour	—	—	0.25 ppm (655 µg/m <sup>3</sup> )
Lead <sup>f</sup>	30-day average	—	—	1.5 µg/m <sup>3</sup>
	Calendar quarter	1.5 µg/m <sup>3</sup>	Same as primary standard	—
	Rolling 3-month average <sup>g</sup>	0.15 µg/m <sup>3</sup>		—
Visibility-reducing particles	8 hour	No national standards		Extinction coefficient of 0.23 per kilometer —visibility of 10 miles or more (0.07 to 30 miles for Lake Tahoe) because of particles when the relative humidity is less than 70%. Method: Beta attenuation and transmittance through filter tape.
Sulfates	24 hour			25 µg/m <sup>3</sup>
Hydrogen sulfide	1 hour			0.03 ppm (42 µg/m <sup>3</sup> )
Vinyl chloride <sup>f</sup>	24 hour			0.01 ppm (26 µg/m <sup>3</sup> )

Notes: mg/m<sup>3</sup> = milligrams per cubic meter; PM<sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM<sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter.

<sup>a</sup> National standards (other than those for ozone and particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than 1. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. Environmental Protection Agency for further clarification and current federal policies.

<sup>b</sup> California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility-reducing particles—are values that are not to be exceeded. All others are not to be equalled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>c</sup> Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

<sup>d</sup> National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

<sup>e</sup> National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>f</sup> The California Air Resources Board has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

<sup>g</sup> National lead standard, rolling 3-month average: final rule signed October 15, 2008.

Source: ARB 2010; USEPA 2010.

## Regional and Local Air Quality

Specific geographic areas are classified as either “attainment” or “nonattainment” areas for each pollutant based on the comparison of measured data with federal and state standards. The SDAB currently meets the federal standards for all criteria pollutants except O<sub>3</sub> and meets state standards for all criteria pollutants except O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. For the 8-hour O<sub>3</sub> standard, the SDAB is classified as “basic” nonattainment, formally called Subpart 1. However, the U.S. Environmental Protection Agency (USEPA) was challenged on its justification for these “basic” nonattainment designations, and, in January 2009, published proposed reclassifications for all “basic” nonattainment areas, which resulted in the SDAB considered in “moderate” nonattainment for the 8-hour O<sub>3</sub> standard. USEPA, in response to a court decision, is expected to rule in 2011 that the SDAB basic nonattainment status for the 8-hour O<sub>3</sub> standard be reclassified as a “serious” nonattainment area, with a mandatory statutory attainment date of June 15, 2013. Final USEPA action on this proposed reclassification has yet to be taken (SANDAG 2011).

The SDAB is currently identified as a federal “maintenance” area for CO, following a 1998 redesignation as a CO attainment area. The CO maintenance area is the western part of San Diego County, with the eastern boundary located near the ridgeline of the mountains east of the metropolitan San Diego area. Table 3.3-2 shows the federal attainment status for the air basin. The SDAB is currently classified as a state O<sub>3</sub> nonattainment area and a state nonattainment area for PM<sub>10</sub> and PM<sub>2.5</sub>.

**Table 3.3-2**  
**Project Area Attainment Status**

Criteria Pollutant	Federal	State
Ozone (O <sub>3</sub> )	Nonattainment	Nonattainment
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment	Attainment
Carbon Monoxide (CO)	Maintenance	Maintenance
Particulate Matter (PM <sub>10</sub> )	Attainment – Unclassified	Nonattainment
Particulate Matter (PM <sub>2.5</sub> )	Attainment	Nonattainment

Source: APCD 2011

To ensure that NAAQS are met, the CAA requires each state with a federal nonattainment area to prepare a comprehensive, strategic, and enforceable air quality control plan with set deadlines for attaining NAAQS. These comprehensive plans are called state implementation plans (SIPs), and they must be updated periodically to keep up with USEPA requirements and new control measures. The California Clean Air Act requires all local air districts in the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date.

## Regional Authority

In San Diego County, the Air Pollution Control District (APCD) is the agency responsible for the administration of federal and state air quality laws, regulations, and policies. Included in APCD’s

tasks are monitoring of air pollution, preparation of the SIP for the SDAB, and promulgation of Rules and Regulations. In response to the federal nonattainment designation for the 8-hour O<sub>3</sub> standard, APCD prepared and ARB approved and submitted the *Eight-Hour Ozone Attainment Plan for San Diego County* (May 2007) to the USEPA. The Plan identifies control measures and associated emission reductions necessary to demonstrate attainment of the 8-hour O<sub>3</sub> NAAQS. The SIP provides plans for attaining and maintaining the 8-hour NAAQS for O<sub>3</sub> and demonstrates how the SDAB would continue to maintain compliance with federal CO standards. The SDAB achieved the NAAQS for CO in 1993 and the USEPA approved a 10-year maintenance plan in 1998. The current version of the maintenance plan is the *2004 Revision to the California State Implementation Plan for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas*.

APCD does not have quantitative emissions limits for construction activities, nor for long-term emissions that may result from increased vehicle use. The Rules and Regulations include procedures and requirements to control the emission of pollutants and to prevent adverse impacts.

## DISCUSSION

### a) Conflict with or obstruct implementation of the applicable air quality plan?

**Less-than-significant Impact.** Implementation of the proposed project would replace an existing bridge and, as such, would not generate additional traffic volumes. The proposed project was developed to reduce existing traffic congestion that has resulted from growth that has already occurred and to reduce projected traffic congestion that would result from growth that is planned or is projected to occur. Therefore, the proposed project would not generate new vehicle trips in the project vicinity or generate sources of area or stationary emissions and would not result in a net increase of long-term operation-related emissions (e.g., regional reactive organic gases [ROG], oxides of nitrogen [NO<sub>x</sub>], or PM<sub>10</sub>, or local CO) from area, mobile, or stationary sources.

The CAA requires a demonstration that federal actions conform to the SIP and similar approved plans in areas that are designated as nonattainment or have maintenance plans for criteria pollutants. Transportation measures, such as the proposed project, are analyzed for conformity with the SIP as part of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP). If the design concept and scope of a proposed transportation project are consistent with the project description in the applicable RTP and RTIP, and the assumptions in the regional emissions analysis for the RTP and RTIP, then the proposed project would conform to the SIP, and no adverse regional air quality impact would occur as a result of the project.

The Metropolitan Planning Organization (MPO) responsible for the preparation of the RTP, RTIP, and the associated air quality analyses in San Diego County is the San Diego Association of Governments (SANDAG). The most current approved versions of the RTP and RTIP are the

2030 RTP (SANDAG 2007a) and 2008 RTIP through Amendment 22 (SANDAG 2008). The proposed project is included in the 2030 RTP and the 2008 RTIP. The 2030 RTP was adopted by SANDAG on November 30, 2007. USDOT adopted a CAA conformity redetermination for the 2030 RTP on November 17, 2008 (USDOT 2008). The 2008 RTIP was approved by the federal agencies on November 17, 2008, and USDOT adopted a CAA conformity determination for the 2008 RTIP on that date (USDOT 2008).

The proposed project is included in SANDAG's 2030 RTP and 2008 RTIP (SANDAG 2007a, 2008, 2010). The design concept and scope of the proposed project are consistent with the project description in the 2030 RTP, the 2008 RTIP, and the assumptions in SANDAG's regional emissions analysis. The proposed project is not affected by the 2008 RTIP Amendments.

The conformity analysis year for the project in the 2030 RTP is 2019. The regional emissions analysis was based on the latest population and employment projections for San Diego County that were accepted by SANDAG on September 8, 2006 (SANDAG 2007). These assumptions are less than 5 years old. The modeling was conducted using current and future population, employment, traffic, and congestion estimates. Therefore, the proposed project would conform to the SIP, and impacts would be less than significant.

**b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Less-than-significant Impact.** Although the project is located in San Diego County, the City of Chula Vista recommends using mass emission thresholds of significance developed by the South Coast Air Quality Management District (SCAQMD). The SCAQMD thresholds are more stringent for ozone precursor emissions, particularly NO<sub>x</sub> emissions. A project with emissions rates below these thresholds is considered to have a less-than-significant impact on regional and local air quality.

The SCAQMD *CEQA Air Quality Handbook* provides guidance on analysis of the air quality impacts of proposed projects (SCAQMD 1993). Table 3.3-3 shows the SCAQMD thresholds of significance for potential air quality impacts. For the purposes of this analysis, ROG is considered equivalent to Volatile Organic Compounds (VOC).

#### Construction

Construction emissions are described as "short-term" or temporary in duration and have the potential to represent a significant impact with respect to air quality, especially fugitive dust emissions. Fugitive dust emissions are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles on- and off-site. ROG and NO<sub>x</sub> emissions are primarily associated with mobile equipment exhaust.



**Table 3.3-3**  
**SCAQMD Air Quality Significance Thresholds**

Pollutant	Construction	Operation
NO <sub>x</sub>	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM <sub>2.5</sub>	55 lbs/day	55 lbs/day
PM <sub>10</sub>	150 lbs/day	150 lbs/day
SO <sub>x</sub>	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants <sup>a</sup>		
NO <sub>2</sub>  1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.053 ppm (federal)	
PM <sub>2.5</sub> 24-hour average annual arithmetic mean	10.4 µg/m <sup>3</sup> (recommended for construction) <sup>b</sup> 2.5 µg/m <sup>3</sup> (operation) 12 µg/m <sup>3</sup>	
PM <sub>10</sub> 24-hour average  annual arithmetic mean	10.4 µg/m <sup>3</sup> (recommended for construction) <sup>3</sup> 2.5 µg/m <sup>3</sup> (operation) 20 µg/m <sup>3</sup>	
Sulfate 24-hour average	25 µg/m <sup>3</sup>	
CO  1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	
Notes: lbs/day = pounds per day ppm = parts per million µg/m3 = micrograms per cubic meter ≥ = greater than or equal to		
<sup>a</sup> Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.		
<sup>b</sup> Ambient air quality thresholds based SCAQMD Rule 403.		
Source: SCAQMD 1993		

Construction of the proposed project would result in the temporary generation of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from site preparation, material transport, bridge construction, and paving. Construction of the proposed project is anticipated to last approximately 27 months and would be conducted in stages in order to maintain vehicle access during construction. Project construction is anticipated for completion by 2019. Phase 1 of construction would consist of relocating the existing waterlines over the course of approximately 3 months. Phase 2 would consist of constructing the eastern portion of the replacement bridge over the course of approximately 12 months. Phase 3 would consist of transferring traffic onto the newly completed eastern portion of the replacement bridge, demolishing the existing bridge, and constructing the western portion of the replacement bridge over the course of approximately 12 months. Construction emissions can substantially vary from day to day, depending on the level of activity, the specific type of operation, and the prevailing weather conditions.

Construction assumptions were developed using the Sacramento Metropolitan Air Quality Management District (SMAQMD) Road Construction Emissions Model, Version 6.3.2 (SMAQMD 2009). The model was developed to estimate the emissions from linear projects, such as bridges, roads, or pipelines. The design characteristics of the proposed project are consistent with the construction activity that would be anticipated by the Road Construction Emissions Model.

The analysis was based on a worst-case scenario representing an intensive day of construction for site clearing, grading/excavation, drainage/utilities/subgrade, and paving activities. Emissions for the proposed project were estimated based on construction worker commutes and the use of off-road equipment. The analysis assumed that the construction site would be approximately 9 acres, and equipment would operate simultaneously for 8 hours per day. Additional details are provided in Appendix A of the Air Quality Impact Analysis prepared for the proposed project.

As shown in Table 3.3-4, construction emissions for the proposed project would result in maximum daily emissions of 3.4 pounds of ROG, 24.7 pounds of NO<sub>x</sub>, 17.7 pounds of CO, 23.5 pounds of PM<sub>10</sub> (combined exhaust and fugitive dust) and 5.7 pounds of PM<sub>2.5</sub>. Although SCAQMD has a significance threshold for lead, emissions of this pollutant are not calculated by Road Construction Emissions Model. Lead emissions have significantly decreased due to the near elimination of lead as an anti-knock gasoline additive; lead emissions from gasoline engines are no longer a principal pollutant of concern.

While the proposed project does not exceed the significance thresholds, the City requires that standard construction best management practices (BMPs) be included in all air quality technical reports for construction projects within the City. These BMPs are listed in mitigation measure AIR-1 below. Implementation of the BMPs listed in mitigation measure AIR-1 would further reduce construction-related emissions presented in Table 3.3-4. Construction-generated emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would not exceed applicable mass emission thresholds established by the SCAQMD. Therefore, construction-related impacts would be less than significant.

**Table 3.3-4**  
**Estimated Maximum Daily Regional Construction Emissions**

Construction Phase	Estimated Emissions (lbs/day)				
	ROG	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Grubbing/Land Clearing	2.7	21.0	11.0	23.2	5.4
Grading/Excavation	3.4	24.7	17.7	23.5	5.7
Drainage/Utilities/Subgrade	2.5	17.2	11.9	23.3	5.4
Paving	1.4	8.2	7.4	0.7	0.6
<b>Maximum Daily Emissions</b>	3.4	24.7	17.7	23.5	5.7
Significance Threshold	75	100	550.0	150	55.0
Exceed Significance?	NO	NO	NO	NO	NO
Source: AECOM 2011					

AIR-1: Prior to the approval of any grading permit, the following measures shall be placed as notes on all grading plans, and shall be implemented during grading of each phase of the project to minimize construction emissions:

- Minimize simultaneous operation of multiple construction equipment units;
- Use low pollutant-emitting construction equipment as practical;
- Use electrical construction equipment as practical; use catalytic reduction for gasoline-powered equipment;
- Use injection timing retard for diesel-powered equipment;
- Water the construction areas a minimum of twice daily to minimize fugitive dust;
- Stabilize graded areas as quickly as possible to minimize fugitive dust;
- Pave permanent roads as quickly as possible to minimize dust;
- Use electricity from power poles instead of temporary generators during building, as feasible;
- Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry;
- Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads;
- Remove any visible track-out into traveled public streets within 30 minutes of occurrence;
- Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred;
- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads;
- Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling; and
- Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 miles per hour (mph).

### Operational Emissions

The proposed project would not generate new vehicle trips and would not generate any additional activities related to maintenance or operations that would increase from existing levels. The proposed project would not result in an increase in vehicle operations but would increase the efficiency of vehicles passing through the widened project segment of Willow Street.

The proposed improvements to the Willow Street Bridge would improve projected future traffic operations. Since the project would not require increased vehicle trips for maintenance or increase emissions over existing levels, operational impacts would be less than significant.

- c) **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?**

**Less-than-significant Impact.** Construction of the proposed project would last 27 months, and the worst-case scenario of construction would result in the emission of pollutants on both the local and regional scales but would not exceed the SCAQMD screening level thresholds for air quality analysis. The proposed project would conform to the SIP. Due to the temporary nature of construction emissions, regional construction emissions from the proposed project would not result in a cumulatively significant impact. Moreover, required fugitive dust control measures would ensure that all PM emissions from proposed construction and operational activities within the SDAB project region, in combination with any reasonably foreseeable future emission source, would produce less-than-significant cumulative effects. With these measures, temporary dust associated with construction would be confined to the site area and would not cumulatively interact with dust generated from other projects.

As discussed earlier, the proposed project would improve projected future traffic operations and would not be anticipated to increase emissions over existing levels. The operational activities of the proposed project would conform to CEQA and NEPA thresholds, would not create a CO or PM hotspot, and would not result in a cumulatively considerable net increase of criteria pollutants. Therefore, the proposed project would not contribute to cumulative air quality impacts.

- d) **Expose sensitive receptors to substantial pollutant concentrations?**

**Less-than-significant Impact.** Air quality regulators typically define sensitive receptors as residences, schools, hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions who might be adversely impacted by changes in air quality. The nearest sensitive receptors to the proposed project are located approximately 300 feet or more from the center of proposed construction and pavement-breaking activities.

The proposed project was evaluated for any localized CO, PM<sub>10</sub>, and/or PM<sub>2.5</sub> violations. The *Transportation Project-Level Carbon Monoxide Protocol, UCD-ITS-97-21* (Protocol), (UCD ITS 1997), provides procedures and guidelines for use by agencies to evaluate the potential local level CO impacts of a transportation project. The Protocol provides a methodology for determining the level of local CO analysis, if any, required on a project. The guidelines comply with the CAA, federal and state conformity rules, and CEQA. The ambient air quality effects of traffic emissions were evaluated qualitatively according to the CO Protocol. The proposed project would not worsen traffic flow, defined for intersections as increasing average delay at signalized intersections operating at LOS E or F. The proposed project meets the screening criteria of the CO Protocol and therefore would not have the potential for causing or worsening a violation of the ambient air quality standards for CO.

A hot spot analysis assesses the air quality impacts on a scale smaller than an entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals. Such an analysis is a means of demonstrating that a transportation project meets CAA conformity requirements to support state and local air quality goals with respect to potential localized air quality impacts. A hot spot analysis is defined in 40 CFR 93.101 as an estimation of likely future localized PM<sub>2.5</sub> or PM<sub>10</sub> pollutant concentrations and a comparison of those concentrations to the relevant air quality standards.

USEPA and FHWA published *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment and Maintenance Areas* (PM Guidance) (FHWA 2006a). To meet state requirements, the proposed project is assessed using the procedure outlined in the PM Guidance. Appendix A of the PM Guidance contains examples of projects of air quality concern and examples of projects that are not an air quality concern. Under the example of projects that are of air quality concern, a significant volume for a new highway or expressway is defined as an annual average daily traffic (AADT) of 125,000 or more, and a significant number of diesel vehicles is defined as 8 percent or more of the total AADT or more than 10,000 truck AADT. A significant increase in diesel truck traffic is normally considered approximately 10 percent.

The proposed improvements to the Willow Street Bridge would improve projected future traffic operations. The design year (2030) AADT volume with the project is 23,500 vehicles (Kimley-Horn 2009), which is less than the volume significance criteria of 125,000 AADT. Diesel-fueled trucks would be anticipated to be less than 4 percent. The diesel-fueled truck percentage would not increase with the proposed project. Based on the estimated maximum traffic volumes and the relatively low percentage of diesel trucks, the proposed project would not be a project of air quality concern, and no localized PM hot spots would occur.

In addition to the criteria air pollutants, USEPA also regulates toxic air contaminants (TACs) also known as hazardous air pollutants. The CAA identified 188 TACs. USEPA has assessed this expansive list of toxics and identified a group of 21 TACs as Mobile Source Air Toxics (MSATs). The MSATs are compounds emitted from highway vehicles and nonroad equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or



passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. USEPA has issued a number of regulations that will dramatically decrease MSATs through cleaner fuels and cleaner engines. According to an FHWA analysis, even if the vehicle miles traveled (VMT) number increases by 64 percent, reductions of 57 percent to 87 percent in MSATs are projected from 2000 to 2020.

Technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project.

The proposed project would increase roadway capacity on the project segment of Willow Street, thereby providing relief to existing and forecast congested arterial roadways. The amount of MSATs emitted would be proportional to the VMT for the Build and the No Build alternatives, assuming that other variables such as fleet mix are the same. The proposed project would increase roadway capacity on the project segment of Willow Street, thereby providing relief to existing and forecast congested arterial roadways of the project area. VMT levels have not been estimated for the proposed project. With respect to through traffic, that is, traffic that does not originate or terminate in the project area, VMT for the proposed project could be more or less than under future conditions with the existing bridge depending on whether this widened roadway and associated other improvements result in shorter or longer travel distance for the drivers attracted to this route in order to avoid other congested roadways. Overall, the project area VMT levels could be greater or less because the roadway widening, combined with the proposed roadway improvements, may attract traffic that would otherwise use alternate routes to avoid current and future congestion that would occur under future conditions with the existing bridge. Therefore, MSATs under the proposed project may be higher or less than under future conditions with the existing bridge in the study area. However, the magnitude of the USEPA-projected reductions is so great, even after accounting for an average national annual VMT growth, that MSAT emissions in the study area are likely to decrease in the future in nearly all cases.

Therefore, the proposed project would not expose sensitive receptors to substantial construction or operational pollutant concentrations and impacts would be less than significant.

**e) Create objectionable odors affecting a substantial number of people?**

**Less-than-significant Impact.** Potential sources that may emit odors during construction activities include equipment exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the proposed project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. The proposed project would not contain any major sources of odor and would not be located in an area with existing odors. Therefore, the proposed

project would not create objectionable odors affecting a substantial number of people and impacts would be less than significant.

**f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

**Less-than-significant Impact.** Certain gases in the earth's atmosphere, classified as greenhouse gases (GHG), play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters earth's atmosphere is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. Infrared radiation is absorbed by GHGs; as a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on earth. Without the naturally occurring greenhouse effect, the earth would not be able to support life.

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The following are the gases that are widely seen as the principal contributors to human-induced global climate change:

- Carbon dioxide (CO<sub>2</sub>)
- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF<sub>6</sub>)

GHG emissions related to human activities are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate (IPCC 2007).

Global warming potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas; the global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO<sub>2</sub>, the most abundant GHG. GHGs with lower emissions rates than CO<sub>2</sub> may still contribute to climate change because they are more effective at absorbing outgoing infrared radiation than CO<sub>2</sub>. The concept of CO<sub>2</sub>-equivalents (CO<sub>2</sub>e) is used to account for the different GWP potentials of GHGs to absorb infrared radiation.

Heavy-duty off-road equipment, materials transport, and worker commutes during construction of the proposed project would result in exhaust emissions of GHGs. GHG emissions generated by construction would be primarily in the form of CO<sub>2</sub>. Although emissions of other GHGs, such as CH<sub>4</sub> and N<sub>2</sub>O, are important with respect to global climate change, the emission levels of these other GHGs from on- and off-road vehicles used during construction are relatively small

compared with CO<sub>2</sub> emissions, even when factoring in the relatively larger global warming potential of CH<sub>4</sub> and N<sub>2</sub>O.

Total project GHG emissions were estimated using the methodology discussed earlier under Section 3.3b. Total project construction emissions would be approximately 918 metric tons of CO<sub>2</sub>e. This assumes the maximum daily emissions would continue for 27 months of the project construction and is a conservative estimate of GHG emissions. No federal, state, regional, or local air quality regulatory agency has adopted a quantitative threshold of significance for construction-related GHG emissions.

The proposed project would not result in an increase in vehicle operations but would increase the efficiency of vehicles passing through the widened project segment of Willow Street, i.e., vehicles operating at higher speeds than congested conditions.

One of the main strategies in the Climate Action Program at Caltrans to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0 to 25 mph) and speeds faster than 55 mph; the most severe emissions occur from 0 to 25 mph. To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO<sub>2</sub>, may be reduced. Thus, the project would reduce GHG emissions from existing vehicles passing through the project segment of Willow Street.

The proposed project is not anticipated to result in a substantial increase in traffic volumes, VMT, or other sources of GHG emissions. Therefore, the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The impact would be less than significant.

**g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

**Less-than-significant Impact.** In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. It requires that statewide GHG emissions be reduced to 1990 levels by 2020. In October 2008, ARB published its *Climate Change AB 32 Scoping Plan*, which is the state's plan to achieve the GHG reductions in California required by AB 32. The Scoping Plan was approved by ARB on December 11, 2008.

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed ARB to develop a Scoping Plan and identify a list of early action GHG reduction measures. In June 2007 ARB approved a list of 37 early action measures, including three discrete early action measures (Low Carbon Fuel Standard, Restrictions on High Global Warming Potential Refrigerants, and Landfill Methane Capture). Discrete early action measures were adopted as regulations and made

effective by January 1, 2010, the date established by Health and Safety Code (HSC) Section 38560.5. The early action items focus on industrial production processes, agriculture, and transportation sectors. Early action items are either not specifically applicable to the proposed project or would result in a reduction of GHG emissions associated with the project.

None of the measures listed in ARB's Scoping Plan directly relate to construction activity. While the Scoping Plan does include some measures that would indirectly address GHG emissions levels associated with construction activity, including the phasing in of cleaner technology for diesel engine fleets (including construction equipment) and the development of a Low Carbon Fuel Standard, successful implementation of these measures will predominantly depend on the development of future laws and policies at the state level, rather than separate actions by individual agencies or local governments. Thus, it is assumed that those policies formulated under the mandate of AB 32 that are applicable to construction-related activity, either directly or indirectly, would be implemented during construction of the proposed project if those policies and laws are developed before the commencement of project construction. Therefore, it is assumed that project construction would not conflict with the Scoping Plan.

The proposed project would increase roadway capacity on the project segment of Willow Street, thereby providing relief to existing and forecast congested arterial roadways of the project area. The amount of GHG emissions emitted by the proposed project would be based on the change in traffic volumes or the net VMT for the Build and the No Build alternatives, assuming that other variables such as fleet mix are the same. As indicated in Section 3.15, Transportation/Traffic, implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other development that would generate new traffic. The proposed project was developed to reduce existing traffic congestion that has resulted from growth that has already occurred and to reduce projected traffic congestion that would result from growth that is planned or is projected to occur. Therefore, the proposed project would not cause an increase in traffic.

The roadway widening would increase roadway capacity, thereby increasing traffic speeds and reducing delays on project roadway segments and intersections. The project traffic report identified existing and future (without the project) failing LOS (LOS F) conditions for the project intersections. Implementation of the proposed project would not change the project intersection LOS designations but would reduce traffic delays at the project intersections (Kimley-Horn 2009).

As discussed earlier, the proposed project would not generate GHG emissions that would have a significant impact on the environment and would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions. The proposed project would not conflict with any applicable plan, policy, or regulation for the purpose of reducing GHG emissions. Neither the City nor any other agency with jurisdiction over this project has adopted climate change or GHG reduction measures with which the proposed project would conflict. Therefore, impacts would be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.4 BIOLOGICAL RESOURCES.</b> Would the project				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## ENVIRONMENTAL SETTING

The proposed project is located within the City of Chula Vista and unincorporated San Diego County on Willow Street between Bonita Road and Sweetwater Road. Land immediately surrounding the proposed project consists of recreational uses and open space. The Chula Vista Municipal Golf Course is east of the proposed project, while undeveloped land associated with the Sweetwater Regional Park is to the west. Additionally, a portion of the multipurpose path associated with the Chula Vista Municipal Golf Course runs parallel to the existing Willow Street Bridge. Similarly, an equestrian trail associated with the Sweetwater Regional Park crosses under the existing Willow Street Bridge and continues on the east side of the bridge

along the path of the Chula Vista Municipal Golf Course multipurpose path. An at-grade grade crossing for the equestrian trail is at Willow Street and Sweetwater Road.

The proposed project is in the Sweetwater Valley, which extends from the Sweetwater Reservoir to San Diego Bay. The Sweetwater River meanders through the Sweetwater Valley and serves as an important biological corridor for both sensitive and nonsensitive wildlife species. Given the nature of the area as a river valley, several sensitive wetland or riparian habitats also occur, in addition to adjacent sensitive upland habitats. These sensitive habitats include southern riparian scrub (wetland habitat), southern coastal salt marsh (wetland habitat), and coastal sage scrub (upland Tier II habitat under the City's MSCP Subarea Plan).

Wetland habitats are rare in the arid southwest and have been further degraded, altered, and lost because of human development throughout the region. The hydrology of the Sweetwater Valley west of Sweetwater Reservoir has been significantly changed since the damming of the Sweetwater Reservoir in 1888. This reduction in water flow has subsequently reduced the amounts and widths of the riparian habitat bordering the Sweetwater River. Development in the Sweetwater Valley has further narrowed riparian habitats within the valley. Consequently, efforts have been undertaken to preserve riparian habitats within the region. Coastal salt marsh habitat and tidal flats are protected and managed as the Sweetwater River Estuary Marsh Complex and South San Diego Bay National Wildlife Refuges where the Sweetwater River empties into San Diego Bay. These two preserves are not only significant to the local movement of sensitive wildlife, but also regionally and nationally important for birds that use these preserves as stopping points along the Pacific Flyway. Additionally, preservation of wetlands is also achieved through implementation of CEQA, which requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. Wetland communities identified within the project area that would be subject to CEQA include southern cottonwood-willow riparian forest and coastal and freshwater marsh.

Due to the rarity of the wetland habitats themselves, the species that depend upon them have become equally rare. A number of federally listed plant and animal species that utilize these habitats exclusively include the California least tern (*Sterna antillarum browni*), light-footed clapper rail (*Rallus longirostris levipes*), least Bell's vireo (*Vireo bellii pusillus*), western snowy plover (*Charadrius alexandrinus nivosus*), and salt marsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*). All of these wetland obligate species are covered under the City's Multiple Species Conservation Plan (MSCP) Subarea Plan. Only the least Bell's vireo was detected within the project area.

The Sweetwater River and its associated wetland habitats are found at the low point of the Sweetwater Valley. As elevation increases and the water table becomes farther and farther away, upland habitats have formed, which are more common than their wetland counterparts. However, upland habitats have also become rare and sensitive within the Sweetwater Valley due to development pressures and other human disturbances, such as fire and introduction of nonnative species. Consequently, upland habitats are also protected under CEQA. Sensitive upland habitat identified within the project area that would be subject to CEQA is limited to coastal sage scrub,



which is known regionally as the habitat used exclusively by the California gnatcatcher (*Poliophtila californica californica*). Upland habitat is also known to contain other federally listed species, such as San Diego ambrosia (*Ambrosia pumila*) and Otay tarplant (*Deinandra conjugens*). All of these species are covered under the City's MSCP Subarea Plan. Only the California gnatcatcher was noted in the project area.

## Field Surveys

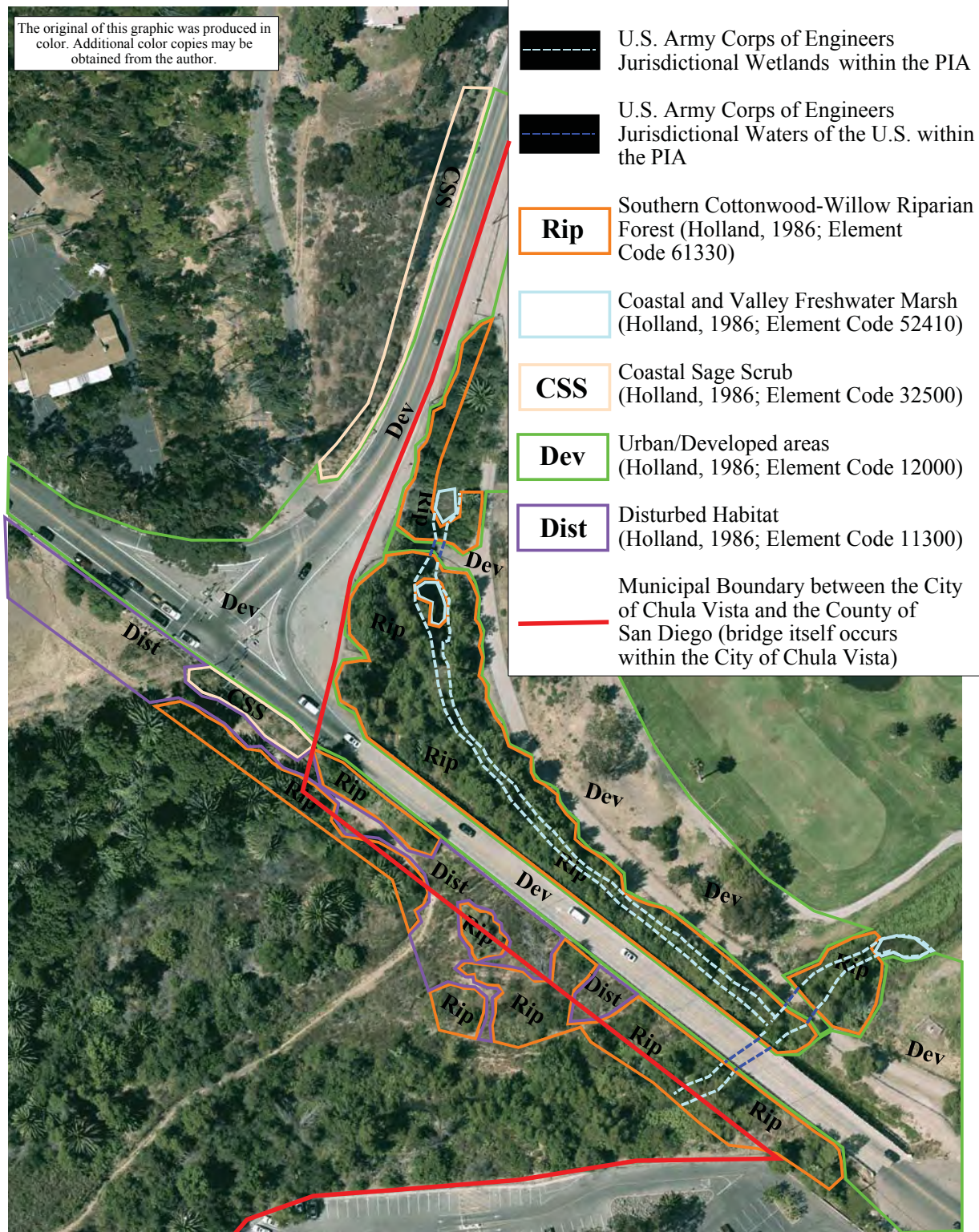
Cummings and Associates conducted field surveys of the project area to identify biological resources located on the project site. These surveys included a wetland delineation, spring plant survey, and least Bell's vireo survey. Each of these surveys included the entire project area, while the least Bell's vireo survey included a larger biological study area (BSA) that extended 500 feet beyond the boundary of the project area to incorporate suitable habitat for the least Bell's vireo that could be indirectly impacted by noise. Formal protocol surveys for the California gnatcatcher were not conducted because an incidental observation of a pair of CAGN was made just outside of the project area on the Sage Scrub-covered slopes above Sweetwater Road during a general survey on October 13, 2009. This patch of coastal sage scrub on the slopes above Sweetwater Road is the only suitable California gnatcatcher habitat within the project area and would not be directly impacted by the proposed project. A second patch of approximately 0.055-acres of coastal sage scrub is located on the south-facing cut bank of the existing Willow Street. However, this patch of coastal Sage Scrub is disturbed and has a high weed component, making it less suitable for occupancy. Therefore, formal protocol surveys for the CAGN were not required.

Two Holland (1986) vegetation communities occur on and in the vicinity of the site in association with the Sweetwater River: southern cottonwood-willow riparian forest; and coastal and freshwater marsh. Both of these vegetation communities are considered to be wetlands under the City's MSCP Subarea Plan Wetland Protection Program. In addition to the wetland habitats, a few patches of coastal sage scrub (Tier II habitat under the City's MSCP Subarea Plan) also occur within the project area. Disturbed habitat (Tier IV habitat under the City's MSCP Subarea Plan), and urban/developed areas (no Tier level) are also present within the project area (Figure 3.4-1).

During every site visit, all sign (including track, scat, and others), direct observation, and auditory inputs (such as songs and calls) were used to identify species presence. Mammals observed within the project area or within the BSA for the least Bell's vireo included numerous Audobon's cottontail (*Sylvilagus audubonii*). Reptiles noted during the survey efforts included numerous western fence lizards (*Sceloporus occidentalis*) and one orange-throated whiptail (*Aspidoscelis hyperythra*).

It should be noted that the existing bridge contains "hinges" that were assessed as potential habitat for bats, swallows, and/or swifts. Upon close inspection, the hinges had a 1½-inch to 2-inch opening and were approximately 6 to 8 inches deep. These dimensions are too small for a swallow or swift to build a nest, whereas the opening is too wide to accommodate roosting bats.

The original of this graphic was produced in color. Additional color copies may be obtained from the author.



Source: Cummings and Associates Job Number 1587.11A 22 November 2010



**Figure 3.4-1**  
**Habitats within the PIA for the**  
**Willow Street Bridge Project**

Willow Street Bridge Replacement Project IS/MND

P:\2004\04080084 Willow Street Bridge\6Graphics\Figures\Fig 1 RMap\_willow st.ai dbrady 1/7/08

## **Bio-Acoustical Analysis**

A noise analysis to evaluate anticipated noise levels during construction and future operation of the proposed project was conducted and the results of this study are presented in Section 3.11. Future traffic noise levels were predicted based on anticipated 2030 operation of the proposed project and using the Federal Highway Administration's (FHWA) Transportation Noise Model (TNM), version 2.5 (FHWA 2004). Results of the noise analysis found that existing operational noise levels in adjacent habitat reached up to 62 dBA in some locations. Noise contours depicting existing operational noise levels are shown in Figure 3.4-4.

### Sensitive Noise Receivers

Sensitive noise receivers include special status avian species that may occupy suitable habitat in the vicinity of the proposed project. Construction noise levels that exceed existing and predicted operational levels could indirectly impact avian species, causing them to change their behavior and move out of the area.

### Construction

Construction noise for the proposed project is anticipated to be typical of that for road construction. Noise would be generated by diesel engine-driven equipment used for site preparation and grading; breaking and removal of existing pavement; loading, unloading, and placing materials and paving; and some pile driving. Diesel engine-driven trucks also would bring materials to the site and remove the spoils from excavation. Construction equipment noise would be heard above the existing normal traffic noise.

As presented in Section 3.11, maximum noise levels may be 85 to 90 dBA at a distance of 50 feet during most construction activities. Hourly average noise levels near the edge of the project site at locations where excavation, grading, and paving occur would be anticipated to be 65 to 75 dBA  $L_{eq}$ . Maximum noise levels during pavement breaking and pile driving would be about 90 dBA and 95 dBA, respectively. As depicted in Figure 3.4-3, predicted hourly average construction noise levels will exceed existing operational levels in surrounding habitat.

### Operation

As depicted in Figure 3.4-4, future (2030) operational noise levels in adjacent habitat would essentially remain unchanged from existing operational levels (up to 62 dBA). As a result, a substantial permanent increase in noise levels to habitat potentially suitable for special status species in the project vicinity would not occur.

## **Vegetation Communities and Habitats Types**

### Southern Cottonwood-Willow Riparian Forest

Southern cottonwood-willow riparian forest, as described by Holland (1986), is characterized by tall, open, broad-leaved winter-deciduous riparian forests dominated by western cottonwood (*Populus fremontii*), and several willow species (*Salix* spp.). The understory is usually composed of shrubby willows. This vegetation community typically occurs in sub-irrigated and frequently overflowed lands along rivers and streams. Plant species typically associated with this habitat include western sycamore (*Platanus racemosa*), western cottonwood, Goodding's black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), narrow-leaf willow (*Salix exigua*), red willow (*Salix laevigata*), and California mugwort (*Artemisia douglasiana*). Common plant species occurring on-site within the southern cottonwood-willow riparian forest include western sycamore, western cottonwood, Goodding's black willow, arroyo willow, narrow-leaf willow, red willow, California mugwort, and mule-fat (*Baccharis salicifolia*).

A number of nonnative, ornamental tree species were noted within the southern cottonwood-willow riparian forest, including Canary Island date palm (*Phoenix canariensis*), Brazilian pepper tree (*Schinus terebinthifolius*), Peruvian pepper tree (*Schinus molle*), eucalyptus (*Eucalyptus* sp.), and Ngaio (*Myoporum laevis*). Southern cottonwood-willow riparian forest is classified as a wetland under the City's MSCP Subarea Plan Wetland Protection Program.

An initial wetland delineation was performed in October of 2009 and an updated wetland delineation was performed on July 25, 2010. The results of the updated 2010 delineation are presented in the Natural Environment Study (NES) prepared for the proposed project. A total of 1.469 acres of southern cottonwood-willow riparian forest occur within the project area. Of that total, 1.182 acres are in the City's jurisdiction and the remaining 0.287 acre is in the County of San Diego's jurisdiction. Within the City's 1.182 acres of riparian habitat, 0.141 acre is considered federal wetlands overhung by a canopy of southern cottonwood-willow riparian forest, while the remaining 1.041 acres of southern cottonwood-willow riparian forest are considered state-defined wetlands. Within the County's 0.287 acre of riparian habitat acreage, 0.005 acre is considered federal wetlands overhung by a canopy of southern cottonwood-willow riparian forest, while the remaining 0.282 acre of southern cottonwood-willow riparian forest is considered state-defined wetlands. However, these wetland acreages do not include the area underneath the bridge, as this area does not contain appropriate wetland indicators to support its classification as either a federal or state wetland, or waters of the U.S.

### Coastal and Valley Freshwater Marsh

Coastal and valley freshwater marsh is dominated by perennial, emergent monocots 4 meters (m) to 5 m tall, often forming completely closed canopies (Holland 1986). Plant species characteristic of this community include willow sedge (*Carex lanuginosa*), yellow nutsedge (*Cyperus esculentus*), spike sedges (*Eleocharis* spp.), cattails (*Typha* spp.), and viscid bulrush (*Scirpus acutus*). The plant species occurring on-site within the marsh included tule (*Scirpus*

*acutus* var. *occidentalis*), Olney's bulrush (*Scirpus americanus*), and broad-leaf cattail (*Typha latifolia*).

An initial wetland delineation was performed in October of 2009 and an updated wetland delineation was performed on July 25, 2010. The results of the updated 2010 delineation are presented in the NES prepared for the proposed project. A total of 0.033 acre of coastal and valley freshwater marsh occurs within the project area and is considered federal wetlands. These isolated patches of freshwater marsh occur completely within the City's jurisdiction.

### Coastal Sage Scrub

Coastal sage scrub habitat occurs as two separate patches within the project area (Figure 3.4-1). Both of these patches of coastal sage scrub are located within the Sweetwater Regional Park, which is under the jurisdiction of the County of San Diego. Dominant shrub species within this habitat include coastal sagebrush (*Artemisia californica*) and flat-top buckwheat (*Eriogonum fasciculatum*). Wildlife species encountered in and adjacent to these on-site patches of coastal sage scrub included the California gnatcatcher, Anna's hummingbird (*Calypte anna*), California towhee (*Pipilo crissalis*), Audubon's cottontail, orange-throated whiptail, and western fence lizard. These two patches of coastal sage scrub are separated by Sweetwater Road and Willow Street (Figure 3.4-1). One patch of the coastal sage scrub occurs south of the intersection of Willow Street and Sweetwater Road and is approximately 0.055 acre. The other patch of coastal sage scrub occurs on the slopes above and northwest of Sweetwater Road and encompasses approximately 0.156 acre.

### Disturbed Habitat

The "disturbed habitat" designation describes areas that have been subject to heavy disturbances in the past and are consequently dominated by weedy herbaceous plant species. Within the project area, these areas occur southwest of the bridge generally as a narrow patch between the Willow Street Bridge and the River Bottom horse trail. This area is dominated by wild radish (*Raphanus sativus*), bull thistle (*Cirsium vulgare*), and prickly lettuce (*Lactuca serriola*).

### Urban/Developed Land

Urban/Developed areas consist of the Chula Vista Municipal Golf Course, Kaiser Permanente parking lot, the existing Willow Street bridge, and surrounding businesses. Ornamental plantings occur in association with surrounding developed areas and are included within that designation. Plant species used for landscaping ornamental areas detected within, and in the vicinity of, the project area include eucalyptus, hottentot fig (*Carpobrotus edulis*), Canary Island date palm, acacia (*Acacia* sp.), and western sycamore.

## **Special Status Plant Species**

### Desert Fragrance

Desert fragrance (*Ambrosia monogyra*) is a shrub species found in dry, sandy washes in the south coastal portion of San Diego County. Desert fragrance holds no state or federal status, but is considered a List 2.2 species by the California Native Plant Society (CNPS). According to the California Natural Diversity Data Base (CNDDB), approximately 30 plants of this species were noted in 1999 west of Willow Street adjacent to Bonita Road in the lower Sweetwater River Valley (CDFG 2010). Based upon the presence of suitable habitat within the project area, and upon the CNDDB record of this species within the immediate vicinity of the project area, this species was designated as having a high potential for occurrence within the project area.

### San Diego Sunflower

San Diego sunflower (*Viguiera laciniata*) is a shrub species found in coastal sage scrub habitats. San Diego sunflower holds no state or federal status, but is considered a List 4.2 species by the CNPS. This species was noted outside the project area along the coastal sage scrub-covered slope above Sweetwater Road during the initial biological reconnaissance in October 2009. As such, it was considered to have a high potential for occurrence within the project area.

## **Special Status Animal Species**

### Orange-throated Whiptail

Orange-throated whiptail (*Aspidoscelis hyperythra*) holds no federal status but is considered a California Species of Concern (CDFG 2009). Orange-throated whiptail is listed as a Covered Species in the City of Chula Vista MSCP Sub Area Plan. It occurs in scrub habitats containing a mixture of ample cover and openings. During the October 2009 reconnaissance survey, a single orange-throated whiptail was observed on the edge of the coastal sage scrub south of the intersection of Sweetwater Road and Willow Street.

### Cooper's Hawk

Cooper's hawk is an accipiter that nests in taller trees, including horticultural tree species such as eucalyptus, but also in native trees, such as oaks. Cooper's hawk holds no federal status, but is on the CDFG Watch List. Cooper's hawk is listed as a Covered Species in the City of Chula Vista MSCP Sub Area Plan. During the eighth survey for the least Bell's vireo on July 25, 2010, a single Cooper's hawk was observed as an overflight south of the project area. Given the timing of the survey and presence of suitable riparian habitat within the project area, this individual is most likely a breeding resident in the vicinity.



### Yellow Warbler

Yellow warbler is a visitor to San Diego County during the summer and can be found in mature riparian habitats as a breeding summer resident. Yellow warbler is listed regionally as a Bird of Conservation Concern (USFWS 2008) and as a California Species of Concern by the CDFG (2009). This species was observed during all eight of the focused surveys for the least Bell's vireo. Although no nest was directly observed, its continued presence throughout the breeding season suggests nesting within the project area.

### Yellow-Breasted Chat

Yellow-breasted chat is a visitor to San Diego County during the summer and can be found in mature riparian habitats as a breeding summer resident. It is listed as a California Species of Concern (CDFG 2009). A single individual chat was heard during the July 2, 2010, focused survey for the least Bell's vireo. Given the timing of the sighting, and the fact that this species was not detected prior or subsequent to this sighting, this individual is believed to be a post-breeding disperser passing through the habitat.

### Least Bell's Vireo

The federally and state endangered least Bell's vireo (*Vireo bellii pusillus*) is a small, olive-gray songbird that nests and forages exclusively in riparian habitats. The Least Bell's vireo is listed as a Covered Species in the City of Chula Vista MSCP Sub Area Plan. Nesting habitat typically consists of riparian woodland with well-developed canopies, structurally diverse understories, and low densities of aquatic and herbaceous cover. The understories often consist of dense thickets of narrow-leaf willow, mule-fat, and saplings of arroyo willow, Goodding's black willow, or one of several possible herbaceous species. Such suitable habitat exists within and adjacent to the project area.

Cummings and Associates conducted eight focused surveys within the BSA for least Bell's vireo during the 2010 breeding season. One least Bell's vireo was detected in the southern cottonwood-willow riparian forest during the seventh survey on July 14, 2010. The bird was making what is believed to be a rambling song as described by Kus et al. (2010). It was heard southwest of the existing bridge outside of the project area near the southwestern edge of the BSA. The report on the specific findings of the focused survey is included in the NES prepared for the proposed project.

According to Unitt (2004), "The Least Bell's Vireo usually arrives in San Diego County in the third week of March." Further, "In San Diego County, Bell's Vireo's nesting season generally lasts from April to July, with egg laying from about 1 April to late June, rarely mid July." Given the timing of the detection later in the season, with no detections of the subspecies during any of the previous or subsequent visits, combined with the type of song, the least Bell's vireo heard during the protocol survey is believed to be an immature bird dispersing after the breeding season.

Focused least Bell's vireo surveys were also conducted during the 2005 and 2006 breeding seasons by Tierra Environmental Services (Tierra). The 2005 survey resulted in the identification of one least Bell's vireo later in the season. The encounter described in the September 14, 2005, report by Tierra is very similar to the encounter during the 2010 survey. Both the 2005 and 2010 detections occurred in the second week in July, and both detections were made via sound rather than sight. The 2006 survey was negative.

### California Gnatcatcher

Coastal California gnatcatcher (*Poliophtila californica*) is a threatened species under the federal Endangered Species Act and is considered a California Species of Concern by CDFG (2009). The California gnatcatcher is listed as a Covered Species in the City of Chula Vista MSCP Sub Area Plan. It is an obligate inhabitant of sage scrub vegetation types (including the coastal sage scrub found on-site). Preston et al. (1998), Atwood (1988), and Braden (1998) have demonstrated that the typical breeding territory of the gnatcatcher is on the order of 20 acres. This is especially true where the habitats are more xeric and less diverse. Where the habitats are more mesic and have a higher shrub diversity, such as coastal San Diego County, the territories may be significantly less than 20 acres in size.

The sage scrub found at the project site is located in small, isolated patches along the fill bank adjacent to the bridge on the south side. There is also a contiguous patch of sage scrub on the cut bank adjacent to Sweetwater Road north of the bridge. Based upon the anticipated temporary and permanent impacts of the project, the only sage scrub impacted by the project would be the isolated patches south of the bridge totaling 0.055-acre.

A pair of California gnatcatchers was noted just outside of the project area during a reconnaissance survey conducted on October 13, 2009. They were observed on the coastal sage scrub-covered slopes above Sweetwater Road.

## **Multiple Species Conservation Program Plans**

### Chula Vista Multiple Species Conservation Program Subarea Plan

The portion of the project area under the jurisdiction of the City is covered by the Chula Vista MSCP Subarea Plan. The proposed project is located in an area designated as "Development Area outside of a Covered Project" in the City's Subarea Plan. As such, compliance with the City's Habitat Loss and Incidental Take (HLIT) ordinance is necessary. The HLIT ordinance implements the City's MSCP Subarea Plan by protecting sensitive habitats and requiring certain mitigation for impacts to those habitats. Additionally, the proposed project is subject to the City's Wetland Protection Program outlined in Section 5.2.4 of the City's MSCP Subarea Plan. For unavoidable impacts to Wetlands, the City will apply the Wetlands mitigation ratios identified in Table 3.4-2. The Wetlands mitigation ratios provide a standard for each habitat type but may be adjusted depending on the functions and values of the impacted Wetlands. This component of the City's MSCP Subarea Plan is not intended to result in subjecting projects to

additive or duplicative, mitigation requirements for the same wetlands impacts evaluated under the Federal and/or State wetland permitting process. In addition, mitigation measures imposed by Federal or State agencies may be substituted for mitigation imposed through the City's WPP; provided that the Federal or State agency mitigation measures are equivalent or greater than those imposed by the City.

#### South County Multiple Species Conservation Program Subarea Plan

The portion of the project area under the jurisdiction of the County of San Diego is covered by the South County segment of the MSCP Subarea Plan. The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species and the preservation of natural vegetation communities in San Diego County. The MSCP addresses the potential impacts of urban growth, natural habitat loss, and species endangerment and creates a plan to mitigate for the potential loss of covered species and their habitat due to the direct impacts of future development of both public and private lands within the MSCP area (County of San Diego 1997). Mitigation for impacts within County land would need to meet the requirements of the South County Segment MSCP Subarea Plan and the County of San Diego's Biological Mitigation Ordinance (BMO). The County of San Diego land adjacent to the western boundary of the proposed project is classified as a "Take Authorized Area," which does not require additional biological mitigation for development to occur.

### **DISCUSSION**

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

**Less-than-Significant Impact with Mitigation Incorporated.** Table 3.4-1 shows the temporary and permanent impacts to habitat types located within the project area. Additionally, Table 3.4-1 differentiates these habitat impacts by jurisdiction. Figure 3.4-2 shows the locations of these temporary and permanent habitat impacts. Discussions of potential temporary and permanent impacts for each habitat type and species are provided below.

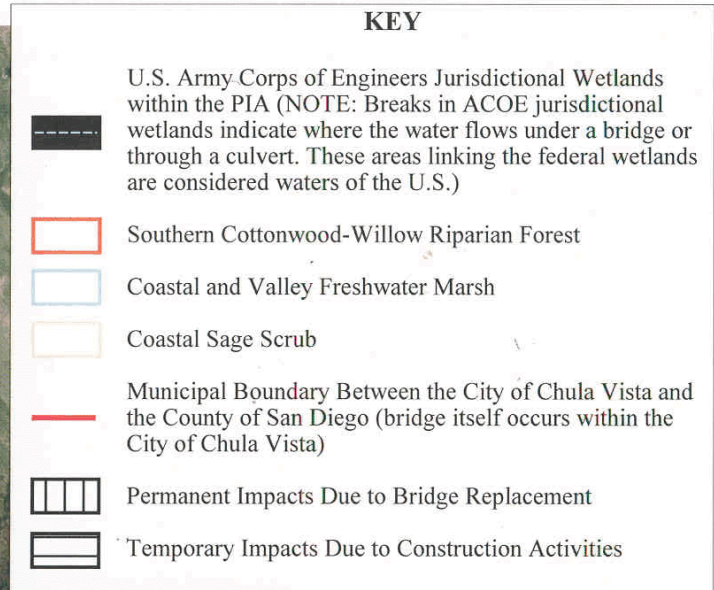
#### **Special Status Plant Species**

No special status plant species were detected on-site, including the desert fragrance or San Diego sunflower. Therefore, the proposed project would not impact any special status plant species.

**Table 3.4-1**  
**Summary of Types and Amounts of Impacts to**  
**Sensitive Natural Communities and Mitigation Required**

<b>Sensitive Natural Community</b>	<b>Permanently Impacted</b>	<b>Temporarily Impacted</b>	<b>Mitigation Ratio<sup>1</sup></b>	<b>Mitigation Required</b>
<b>City of Chula Vista</b>				
Coastal and Valley Freshwater Marsh	None	None	N/A	None
Southern Cottonwood-Willow Riparian Forest	0.442 acre	0.468 acre	1:1 for temporary impacts; 3:1 for permanent impacts	Restoration of 0.468 acre on-site; 1.326 acres of wetland mitigation with at least 0.442 acre being creation
Unvegetated Channels	None	0.014 acre	1:1 for temporary impacts	Restoration of 0.014 acre of unvegetated channels
<b>County of San Diego</b>				
Coastal and Valley Freshwater Marsh	None	None	N/A	None
Southern Cottonwood-Willow Riparian Forest <sup>2</sup> (Tier I)	None	0.287 acre	1:1 for temporary impacts	Restoration of 0.287 acre of southern cottonwood-willow riparian forest on the County property
Coastal Sage Scrub (Tier II)	None	0.055 acre	1:1 for temporary impacts	Restoration of 0.055 acre of coastal sage scrub on the County property
Totals	0.442 acre	0.824 acre		Restoration of 0.755 acre of southern cottonwood-willow riparian forest, 0.055 acre of coastal sage scrub, and 0.014 acre of unvegetated channels; enhancement/creation of 1.326-acres of southern cottonwood-willow riparian forest

<sup>1</sup> The mitigation ratio for coastal sage scrub impacts has been reduced from the recommended 1.5:1 ratio in the County's Biological Mitigation Ordinance (BMO) due to the temporary nature of the impacts. Mitigation ratios for wetland impacts are consistent with the City's Wetland Protection Program, the County's BMO, and the state and federal guidelines pertaining to "no net loss." However, temporary impacts to the southern cottonwood-willow riparian forest within the County's jurisdiction occur within an existing mitigation area, and depending upon negotiations with the wildlife agencies, mitigation for those impacts could be as high as 6:1.



nings and Associates Job Number 1587.11A 17 November 2010

Scale: 1-inch = 120-feet

[A1587-NES-Fig-5.wpg]

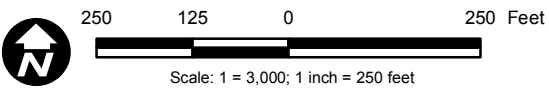


**Figure 3.4-2**  
Permanent and Temporary Impacts to Sensitive Habitats  
Resulting from the Willow Street Bridge Project





Source: Simon Wong 2010; SanGIS 2010; DigitalGlobe 2008



## Legend

Primary Impact Area

### Existing Operatoinal Contours

58 Decibels

60 Decibels

62 Decibels

### Anticipated Construction Contours

58 Decibels

60 Decibels

62 Decibels

### Habitation Type

Coastal Sage Scrub

Developed

Disturbed

Freshwater March

Riparian Forest

Figure 3.4-3

Existing Operational Noise Contours  
and Construction Noise Contours

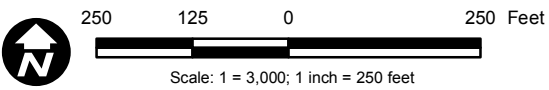


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Source: Simon Wong 2010; SanGIS 2010; DigitalGlobe 2008



**Figure 3.4-4**  
**Existing and Anticipated**  
**Operational Noise Contours**



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## Special Status Animal Species

### Orange-Throated Whiptail

#### Direct Impacts

As shown in Table 3.4-1, implementation of the proposed project would temporarily impact 0.055 acre of coastal sage scrub south of the intersection of Willow Street and Sweetwater Road during construction. This coastal sage scrub is classified as suitable habitat for the orange-throated whiptail. This is a potentially significant impact. However, implementation of mitigation measures BIO-1 and BIO-2 would mitigate this impact to a level less than significant. Additionally, implementation of mitigation measures BIO-9 through BIO-15 would prevent additional indirect impacts to orange throated whiptail.

#### Indirect Impacts

Construction of the proposed project would have the potential for temporary indirect impacts to orange-throated whiptail within the project area and vicinity. Runoff and sediment dislodged during construction and hazardous materials used during construction could flow downstream and degrade suitable habitat for the orange-throated whiptail. Toxic substances used during construction that could affect suitable habitat for the orange-throated whiptail include, but are not limited to, fuel, oil, and coolants. Similarly, fugitive dust generated during construction activities could accumulate on surrounding vegetation, degrading suitable habitat for the orange-throated whiptail, causing them to change their behavior and leave or avoid the area. Indirect impacts from these construction-related activities would be temporary, as these impacts would end with cessation of project construction. Furthermore, implementation of construction BMPs identified in mitigation measure BIO-16 through BIO-18 and HYDRO-1 would reduce temporary indirect impacts related to siltation/sedimentation and toxic substances to a level less than significant.

Construction of the proposed project would have the potential for permanent, indirect impacts by increasing or introducing invasive plant species into the project area and vicinity. Specifically, construction activities could promote spread of exotics by creating disturbed areas that could result in the spread of these exotics into adjacent undisturbed areas, and ongoing potential erosion, runoff, and sedimentation into riparian areas. These permanent indirect impacts could degrade suitable habitat for orange-throated whiptail. However, implementation of the revegetation plan described in mitigation measure BIO-9 would reduce this impact to a level less than significant. This revegetation plan will stipulate that project landscaping will not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. All plants included in the revegetation plan will be selected from the City's approved plant list. Furthermore, the revegetation plan will include invasive plant species control measures to implement should exotic species become established.

Construction of the proposed project may occasionally require night work with lighting that could affect orange-throated whiptails within the project area. Similarly, permanent bridge

lighting during operation of the proposed project may be required due to the length of the span in accordance with local standards that could affect orange-throated whiptails within the project area. An increase in nighttime lighting in the project area and vicinity could increase predation rates, decrease nest success, or cause direct habitat avoidance. However, implementation of mitigation measure BIO-19 would reduce indirect impacts associated with lighting to a level less than significant.

#### Cooper's Hawk

##### Direct Impacts

A single Cooper's hawk was detected during the eighth focused survey for the least Bell's vireo. This particular sighting was made outside of the project area, but within the BSA, which extended 500 feet beyond the project area boundary to incorporate suitable habitat for the least Bell's vireo that could be indirectly impacted by noise. However, no nests of this species were observed during the field surveys. Therefore, direct impacts to the Cooper's hawk would be limited to loss of the southern cottonwood-willow riparian forest, which is classified as potential foraging habitat for the Cooper's hawk. This is a potentially significant impact. However, implementation of mitigation measures BIO-3 through BIO-5 would mitigate this impact to a level less than significant. Additionally, implementation of mitigation measures BIO-9 through BIO-15 would prevent additional direct impacts to Cooper's hawk.

##### Indirect Impacts

Construction of the proposed project would have the potential for temporary indirect impacts to Cooper's hawk within the project area and vicinity. Runoff and sediment dislodged during construction and hazardous materials used during construction could flow downstream and degrade suitable habitat for the Cooper's hawk. Toxic substances used during construction that could affect suitable habitat for the Cooper's hawk include, but are not limited to, fuel, oil, and coolants. Similarly, fugitive dust generated during construction activities could accumulate on surrounding vegetation, degrading suitable habitat for the Cooper's hawk, causing them to change their behavior and leave or avoid the area. Indirect impacts from these construction-related activities would be temporary, as these impacts would end with cessation of project construction. Furthermore, implementation of construction BMPs identified in mitigation measure BIO-16 through BIO-18 and HYDRO-1 would reduce temporary indirect impacts related to siltation/sedimentation and toxic substances to a level less than significant.

Construction of the proposed project would have the potential for permanent, indirect impacts by increasing or introducing invasive plant species into the project area and vicinity. Specifically, construction activities could promote spread of exotics by creating disturbed areas that could result in the spread of these exotics into adjacent undisturbed areas, and ongoing potential erosion, runoff, and sedimentation into riparian areas. These permanent indirect impacts could degrade suitable habitat for Cooper's hawk. However, implementation of the revegetation plan described in mitigation measure BIO-9 would reduce this impact to a level less than significant.

This revegetation plan will stipulate that project landscaping will not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. All plants included in the revegetation plan will be selected from the City's approved plant list. Furthermore, the revegetation plan will include invasive plant species control measures to implement should exotic species become established.

Construction of the proposed project may occasionally require night work with lighting that could affect Cooper's hawks within the project area. Similarly, permanent bridge lighting during operation of the proposed project may be required due to the length of the span in accordance with local standards that could affect Cooper's hawks within the project area. An increase in nighttime lighting in the project area and vicinity could increase predation rates, decrease nest success, or cause direct habitat avoidance. However, implementation of mitigation measure BIO-19 would reduce indirect impacts associated with lighting to a level less than significant.

Construction of the proposed project would generate noise levels that exceed 60 dBA. Noise levels exceeding 60 dBA or existing ambient noise conditions, whichever is higher, would have the potential for temporary indirect impacts to Cooper's hawk if they are present in the vicinity, causing them to change their behavior (e.g., nest abandonment), leave the area, or avoid habitat within proximity of the project. However, implementation of mitigation measure BIO-6 would reduce indirect impacts associated with temporary elevated noise levels to less than significant.

### Yellow Warbler

#### Direct Impacts

The yellow warbler was detected during each of the eight focused surveys for the least Bell's vireo. Generally, the sightings were within the project area, but some were southwest of the project area within the BSA for the least Bell's vireo survey. Therefore, direct impacts to the yellow warbler would be limited to loss of the southern cottonwood-willow riparian forest, which is classified as potential foraging habitat for the yellow warbler. This is a potentially significant impact. However, implementation of mitigation measures BIO-3 through BIO-5 would mitigate this impact to a level less than significant. Additionally, implementation of mitigation measures BIO-9 through BIO-15 would prevent additional direct impacts to yellow warbler.

#### Indirect Impacts

Construction of the proposed project would have the potential for temporary indirect impacts to yellow warbler within the project area and vicinity. Runoff and sediment dislodged during construction and hazardous materials used during construction could flow downstream and degrade suitable habitat for the yellow warbler. Toxic substances used during construction that could affect suitable habitat for the yellow warbler include, but are not limited to, fuel, oil, and coolants. Similarly, fugitive dust generated during construction activities could accumulate on surrounding vegetation, degrading suitable habitat for the yellow warbler, causing them to change their behavior and leave or avoid the area. Indirect impacts from these construction-



related activities would be temporary, as these impacts would end with cessation of project construction. Furthermore, implementation of construction BMPs identified in mitigation measure BIO-16 through BIO-18 and HYDRO-1 would reduce temporary indirect impacts related to siltation/sedimentation and toxic substances to a level less than significant.

Construction of the proposed project would have the potential for permanent, indirect impacts by increasing or introducing invasive plant species into the project area and vicinity. Specifically, construction activities could promote spread of exotics by creating disturbed areas that could result in the spread of these exotics into adjacent undisturbed areas, and ongoing potential erosion, runoff, and sedimentation into riparian areas. These permanent indirect impacts could degrade suitable habitat for yellow warbler. However, implementation of the revegetation plan described in mitigation measure BIO-9 would reduce this impact to a level less than significant. This revegetation plan will stipulate that project landscaping will not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. All plants included in the revegetation plan will be selected from the City's approved plant list. Furthermore, the revegetation plan will include invasive plant species control measures to implement should exotic species become established.

Construction of the proposed project may occasionally require night work with lighting that could affect yellow warblers within the project area. Similarly, permanent bridge lighting during operation of the proposed project may be required due to the length of the span in accordance with local standards that could affect yellow warblers within the project area. An increase in nighttime lighting in the project area and vicinity could increase predation rates, decrease nest success, or cause direct habitat avoidance. However, implementation of mitigation measure BIO-19 would reduce indirect impacts associated with lighting to a level less than significant.

Construction of the proposed project would generate noise levels that exceed 60 dBA. Noise levels exceeding 60 dBA or existing ambient noise conditions, whichever is higher, would have the potential for temporary indirect impacts to yellow warbler if they are present in the vicinity, causing them to change their behavior (e.g., nest abandonment), leave the area, or avoid habitat within proximity of the project. However, implementation of mitigation measure BIO-6 would reduce indirect impacts associated with temporary elevated noise levels to less than significant.

#### Yellow-Breasted Chat

##### Direct Impacts

A single yellow-breasted chat was detected during one of the focused surveys for the least Bell's vireo. This particular sighting was made outside of the project area, but within the BSA established for the least Bell's vireo survey. Therefore, direct impacts to the yellow-breasted chat would be limited to loss of the southern cottonwood-willow riparian forest, which is classified as potential foraging habitat for the yellow-breasted chat. This is a potentially significant impact. However, implementation of mitigation measures BIO-3 through BIO-5 would mitigate this

impact to a level less than significant. Additionally, implementation of mitigation measures BIO-9 through BIO-15 would prevent additional direct impacts to yellow-breasted chat.

#### Indirect Impacts

Construction of the proposed project would have the potential for temporary indirect impacts to yellow-breasted chat within the project area and vicinity. Runoff and sediment dislodged during construction and hazardous materials used during construction could flow downstream and degrade suitable habitat for the yellow-breasted chat. Toxic substances used during construction that could affect suitable habitat for the yellow-breasted chat include, but are not limited to, fuel, oil, and coolants. Similarly, fugitive dust generated during construction activities could accumulate on surrounding vegetation, degrading suitable habitat for the yellow-breasted chat, causing them to change their behavior and leave or avoid the area. Indirect impacts from these construction-related activities would be temporary, as these impacts would end with cessation of project construction. Furthermore, implementation of construction BMPs identified in mitigation measure BIO-16 through BIO-18 and HYDRO-1 would reduce temporary indirect impacts related to siltation/sedimentation and toxic substances to a level less than significant. Construction of the proposed project would have the potential for permanent, indirect impacts by increasing or introducing invasive plant species into the project area and vicinity. Specifically, construction activities could promote spread of exotics by creating disturbed areas that could result in the spread of these exotics into adjacent undisturbed areas, and ongoing potential erosion, runoff, and sedimentation into riparian areas. These permanent indirect impacts could degrade suitable habitat for yellow-breasted chat. However, implementation of the revegetation plan described in mitigation measure BIO-9 would reduce this impact to a level less than significant. This revegetation plan will stipulate that project landscaping will not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. All plants included in the revegetation plan will be selected from the City's approved plant list. Furthermore, the revegetation plan will include invasive plant species control measures to implement should exotic species become established.

Construction of the proposed project may occasionally require night work with lighting that could affect yellow-breasted chats within the project area. Similarly, permanent bridge lighting during operation of the proposed project may be required due to the length of the span in accordance with local standards that could affect yellow-breasted chats within the project area. An increase in nighttime lighting in the project area and vicinity could increase predation rates, decrease nest success, or cause direct habitat avoidance. However, implementation of mitigation measure BIO-19 would reduce indirect impacts associated with lighting to a level less than significant.

Construction of the proposed project would generate noise levels that exceed 60 dBA. Noise levels exceeding 60 dBA or existing ambient noise conditions, whichever is higher, would have the potential for temporary indirect impacts to yellow-breasted chat if they are present in the vicinity, causing them to change their behavior (e.g., nest abandonment), leave the area, or avoid habitat within proximity of the project. However, implementation of mitigation measure BIO-6

would reduce indirect impacts associated with temporary elevated noise levels to less than significant.

#### Least Bell's Vireo

##### Direct Impacts

One least Bell's vireo individual was detected in the southern cottonwood-willow riparian Forest during the seventh survey on 14 July 2010. Loss of the southern cottonwood-willow riparian forest would have the potential to impact the least Bell's vireo because it is classified as suitable nesting and foraging habitat for this species. This is a potentially significant impact. However, implementation of mitigation measures BIO-3 through BIO-6 would mitigate this impact to a level less than significant. Additionally, implementation of mitigation measures BIO-9 through BIO-15 would prevent additional direct impacts to least Bell's vireo.

##### Indirect Impacts

Construction of the proposed project would have the potential for temporary indirect impacts to least Bell's vireo within the project area and vicinity. Runoff and sediment dislodged during construction and hazardous materials used during construction could flow downstream and degrade suitable habitat for the least Bell's vireo. Toxic substances used during construction that could affect suitable habitat for the least Bell's vireo include, but are not limited to, fuel, oil, and coolants. Similarly, fugitive dust generated during construction activities could accumulate on surrounding vegetation, degrading suitable habitat for the least Bell's vireo, causing them to change their behavior and leave or avoid the area. Indirect impacts from these construction-related activities would be temporary, as these impacts would end with cessation of project construction. Furthermore, implementation of construction BMPs identified in mitigation measure BIO-16 through BIO-18 and HYDRO-1 would reduce temporary indirect impacts related to siltation/sedimentation and toxic substances to a level less than significant.

Construction of the proposed project would have the potential for permanent, indirect impacts by increasing or introducing invasive plant species into the project area and vicinity. Specifically, construction activities could promote spread of exotics by creating disturbed areas that could result in the spread of these exotics into adjacent undisturbed areas, and ongoing potential erosion, runoff, and sedimentation into riparian areas. These permanent indirect impacts could degrade suitable habitat for least Bell's vireo. However, implementation of the revegetation plan described in mitigation measure BIO-9 would reduce this impact to a level less than significant. This revegetation plan will stipulate that project landscaping will not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. All plants included in the revegetation plan will be selected from the City's approved plant list. Furthermore, the revegetation plan will include invasive plant species control measures to implement should exotic species become established.

Construction of the proposed project may occasionally require night work with lighting that could affect least Bell's vireos within the project area. Similarly, permanent bridge lighting during operation of the proposed project may be required due to the length of the span in accordance with local standards that could affect least Bell's vireos within the project area. An increase in nighttime lighting in the project area and vicinity could increase predation rates, decrease nest success, or cause direct habitat avoidance. However, implementation of mitigation measure BIO-19 would reduce indirect impacts associated with lighting to a level less than significant.

Construction of the proposed project would generate noise levels that exceed 60 dBA. Noise levels exceeding 60 dBA or existing ambient noise conditions, whichever is higher, would have the potential for temporary indirect impacts to least Bell's vireo if they are present in the vicinity, causing them to change their behavior (e.g., nest abandonment), leave the area, or avoid habitat within proximity of the project. However, implementation of mitigation measure BIO-6 would reduce indirect impacts associated with temporary elevated noise levels to less than significant.

### California Gnatcatcher

#### Direct Impacts

A pair of California gnatcatchers was detected during a general biological survey at the project site in October 2009. This particular sighting was outside of the project area. However, it is anticipated that this California gnatcatcher pair uses the contiguous patch of coastal sage scrub habitat within the project area, on the cut bank adjacent to Sweetwater Road north of the existing bridge. Direct impacts to this patch of coastal sage scrub would be avoided.

A second patch of approximately 0.055 acre of coastal sage scrub habitat south of the intersection of Willow Street and Sweetwater Road would be directly impacted by the proposed project. However, this patch of coastal sage scrub was not deemed suitable habitat for the California gnatcatcher because it is disturbed and has a high weed component, making it less suitable for occupancy. Implementation of mitigation measures BIO-9 through BIO-15 would prevent additional direct impacts to the California gnatcatcher.

#### Indirect Impacts

Construction of the proposed project would have the potential for temporary indirect impacts to California gnatcatcher within the project area and vicinity. Runoff and sediment dislodged during construction and hazardous materials used during construction could flow downstream and degrade suitable habitat for the California gnatcatcher. Toxic substances used during construction that could affect suitable habitat for the California gnatcatcher include, but are not limited to, fuel, oil, and coolants. Similarly, fugitive dust generated during construction activities could accumulate on surrounding vegetation, degrading suitable habitat for the California gnatcatcher, causing them to change their behavior and leave or avoid the area. Indirect impacts from these construction-related activities would be temporary, as these impacts would end with

cessation of project construction. Furthermore, implementation of construction BMPs identified in mitigation measure BIO-16 through BIO-18 and HYDRO-1 would reduce temporary indirect impacts related to siltation/sedimentation and toxic substances to a level less than significant.

Construction of the proposed project would have the potential for permanent, indirect impacts by increasing or introducing invasive plant species into the project area and vicinity. Specifically, construction activities could promote spread of exotics by creating disturbed areas that could result in the spread of these exotics into adjacent undisturbed areas, and ongoing potential erosion, runoff, and sedimentation into riparian areas. These permanent indirect impacts could degrade suitable habitat for California gnatcatcher. However, implementation of the revegetation plan described in mitigation measure BIO-9 would reduce this impact to a level less than significant. This revegetation plan will stipulate that project landscaping will not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. All plants included in the revegetation plan will be selected from the City's approved plant list. Furthermore, the revegetation plan will include invasive plant species control measures to implement should exotic species become established.

Construction of the proposed project may occasionally require night work with lighting that could affect California gnatcatchers within the project area. Similarly, permanent bridge lighting during operation of the proposed project may be required due to the length of the span in accordance with local standards that could affect California gnatcatchers within the project area. An increase in nighttime lighting in the project area and vicinity could increase predation rates, decrease nest success, or cause direct habitat avoidance. However, implementation of mitigation measure BIO-19 would reduce indirect impacts associated with lighting to a level less than significant.

Construction of the proposed project would generate noise levels that exceed 60 dBA. Noise levels exceeding 60 dBA or existing ambient noise conditions, whichever is higher, would have the potential for temporary indirect impacts to California gnatcatcher if they are present in the vicinity, causing them to change their behavior (e.g., nest abandonment), leave the area, or avoid habitat within proximity of the project. However, implementation of mitigation measure BIO-6 would reduce indirect impacts associated with temporary elevated noise levels to less than significant.

BIO-1: Temporary impacts to 0.055 acre of coastal sage scrub will be revegetated and restored to pre-existing conditions. The temporary impacts to 0.055 acre of coastal sage scrub are located on County-owned lands. Per the County's BMO, the mitigation ratio would be 1.5:1 for impacts to coastal sage scrub outside the preserve that are mitigated outside the preserve. However, a reduced 1:1 mitigation ratio has been proposed due to the temporary nature of the impacts. Mitigation will take the form of restoration of an equal amount of this habitat on-site once construction is complete. Additional mitigation may be required based upon ongoing negotiations with the resource agencies. Restoration of these temporary impacts to coastal sage scrub will begin immediately upon completion of construction and will be outlined in the conceptual and final mitigation plan. The City of Chula Vista will be responsible for the

restoration of these temporary impacts to southern cottonwood-willow riparian forest and coastal sage scrub.

BIO-2: To avoid any direct impacts to raptors and/or any migratory birds, removal of habitat that supports active nests on the proposed area of disturbance should occur outside of the breeding season for these species (January 15 to August 31). If removal of habitat on the proposed area of disturbance must occur during the breeding season, a City-approved biologist will be retained to conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey must be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The results of the pre-construction survey will be reviewed and approved by the City prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan as deemed appropriate by the City's Assistant City Manager/Development Services Director will be prepared and will include proposed measures to be implemented to ensure that disturbance of breeding activities is avoided. The report or mitigation plan will be prepared and implemented to the satisfaction of the City's Assistant City Manager/Development Services Director. The City's Mitigation Monitor will verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. The City of Chula Vista will be responsible for implementing restrictions on clearing and grubbing of upland habitats.

BIO-3: Temporary impacts to 0.755 acre of southern cottonwood-willow riparian forest will be revegetated and restored to pre-existing conditions. Additional mitigation may be required based upon ongoing negotiations with the resource agencies. Restoration of these temporary impacts to southern cottonwood-willow riparian forest will begin immediately upon completion of construction and will be outlined in the conceptual and final mitigation plan. The City of Chula Vista will be responsible for the restoration of these temporary impacts to southern cottonwood-willow riparian forest and coastal sage scrub.

BIO-4: Permanent impacts to 0.442 acre of southern cottonwood-willow riparian forest will be offset through the off-site creation/enhancement of 0.537 ha (1.326 ac) of southern cottonwood-willow riparian forest prior to, or concurrent with project construction. The City of Chula Vista will be responsible for the off-site creation/enhancement of southern cottonwood-willow riparian forest.

BIO-5: No clearing and grubbing of native riparian habitats may occur from March 15 through September 15 to avoid the breeding season of the least Bell's vireo. If vegetation clearing cannot be restricted to outside the breeding season, a determination regarding the occupancy of the site by least Bell's vireo must be made. A qualified biologist will conduct a pre-construction clearance survey 1 week prior to the start of construction or on March 15, whichever is later. Construction activities will cease during the time of the survey. If no least Bell's vireos are detected during the pre-construction clearance survey, vegetation clearing can commence or continue. However, if least Bell's vireo are detected during the pre-construction clearance survey, all vegetation clearing activities will stop until September 16 or until a qualified biologist can demonstrate that the least Bell's vireo have left the site for the season. The City of Chula

Vista will be responsible for implementing restrictions on clearing and grubbing of native riparian habitats.

BIO-6: If construction work is necessary during the bird breeding season (February 15 to September 15) that would generate noise levels exceeding 60 dBA or ambient noise levels (whichever is greater) in the adjacent suitable habitat, avian surveys will be conducted to ensure that the construction noise will not result in impacts to breeding birds. A minimum of three surveys will be conducted at 4 to 5-day intervals during the 2-week period before project-related activities begin/continue during the breeding season. Each survey will cover all suitable habitat where there is a possibility of indirect noise effects resulting from project construction. Surveys for breeding birds will last at least 3 hours between the hours of 0600 and 1200. The surveys will be performed by a qualified biologist.<sup>1</sup> Additional surveys will be done once every 2 weeks during project construction in the breeding season. The City will be notified if any breeding birds are found. If breeding birds are present in the vicinity of the site and there is a possibility of indirect noise effects, then a noise consultant will be employed and noise monitoring will be conducted. If noise monitoring documents that ambient levels are exceed 60 dBA at the location of any occupied habitat areas, then the associated construction shall cease and the noise consultant and the qualified biologist shall prepare and submit to the satisfaction of the Development Services Director (or their designee), a noise reduction plan to reduce noise levels to ambient conditions. If there are no alternatives available to reduce the noise levels, then the associated construction activities will cease until breeding birds are no longer detected in the area or the end of the breeding season (September 16). The City of Chula Vista will be responsible for implementing restrictions on construction work during the bird breeding season.

BIO-7: Temporary impacts to waters of the U.S. total 0.014 acre and will be mitigated by restoration of 0.014 acre of waters of the U.S. on-site immediately upon completion of construction. Mitigation ratios for this restoration are shown in Table 3.4-2.

BIO-8: Prior to issuance of land development permits, including clearing or grubbing and grading permits for areas that impact jurisdictional waters, the project proponent shall obtain all required regulatory permits, such as those required under Section 404 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter Cologne Water Quality Act. The City of Chula Vista will be responsible for obtaining these regulatory permits.

BIO-9: Prior to commencement of any construction related activities, a revegetation plan will be developed to address both temporary and permanent impacts, including 0.055 acre of temporary impacts to coastal sage scrub, 0.755 acre of temporary impacts to southern cottonwood-willow riparian forest, and 0.442 acre of permanent impacts to southern cottonwood-willow riparian forest. The revegetation plan will be prepared by a qualified City-approved biologist familiar with the City's MSCP Subarea Plan and the plan will be submitted to the City's Development Services Director (or their designee) for review and approval. The revegetation plan will include, but will not be limited to, an implementation strategy; species salvage and relocation; appropriate

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<sup>1</sup> The biologist for this measure should be experienced in bird biology and ecology, preferably with prior experience in identifying bird territories using behavioral cues.



**Table 3.4-2**  
**Summary of Types and Amounts of Jurisdictional Wetlands**  
**and Waters of the U.S., Projected Impacts, and Mitigation Required**

<b>Jurisdictional Wetlands and Other Waters</b>	<b>Amount Within Project Area (acres)</b>	<b>Permanently Impacted<sup>1</sup> (acres)</b>	<b>Temporarily Impacted<sup>2</sup> (acres)</b>	<b>Mitigation Ratio<sup>5</sup></b>	<b>Mitigation Required</b>
<b>City of Chula Vista</b>					
<b>ACOE/CDFG Jurisdictional Wetlands and Other Waters<sup>3</sup></b>					
Southern Cottonwood-Willow Riparian Forest	0.141	0.065	0.057	1:1 for temporary impacts; 3:1 for permanent impacts	Restoration of 0.057 acre on-site for temporary impacts (1:1); enhancement/creation of 0.195 acre of federal wetland mitigation (3:1) with an at least 0.065-acre creation component
Coastal and Valley Freshwater Marsh	0.033	None	None	N/A	None
Waters of the U.S.	0.017	None	0.014	1:1 for temporary impacts	Restoration of 0.014 acre on-site for temporary impacts (1:1)
<b>CDFG Jurisdictional Wetlands Only<sup>4</sup></b>					
Southern Cottonwood-Willow Riparian Forest	1.041	0.377	0.411	1:1 for temporary impacts; 3:1 for permanent impacts	Restoration of 0.411 acre on-site for temporary impacts (1:1); enhancement/creation of 1.131 acres of state jurisdictional riparian habitat (3:1) with an at least 0.377-acre creation component
<b>County of San Diego</b>					
<b>ACOE/CDFG Jurisdictional Wetlands and Other Waters<sup>3</sup></b>					
Southern Cottonwood-Willow Riparian Forest	0.005	None	0.005	1:1 for temporary impacts	Restoration of 0.005 acre on County lands for temporary impacts (1:1)
<b>CDFG Jurisdictional Wetlands Only<sup>4</sup></b>					
Southern Cottonwood-Willow Riparian Forest	0.282	None	0.282	1:1 for temporary impacts	Restoration of 0.282 acre on County lands for temporary impacts (1:1)
Totals	1.519	0.442	0.769		Restoration of 0.062 acre of federal wetlands, 0.014 acre of waters of the U.S., and 0.693 acre of CDFG wetlands; enhancement/creation of 0.195 acre of federal wetlands, and 1.131 acres of CDFG wetlands

<sup>1</sup> Permanent impacts to the riparian forest will be due to shading. It is anticipated that these areas will be converted to waters of the U.S. post-construction. It is not known at this time how much mitigation credit will be given for this from the permitting agencies.

<sup>2</sup> Temporary impacts to the waters of the U.S. and to the riparian forest will be due to construction activities associated with the bridge replacement.

<sup>3</sup> For use with ACOE, RWQCB, and CDFG permitting.

<sup>4</sup> For use with CDFG permitting only.

<sup>5</sup> Temporary impacts to the southern cottonwood-willow riparian forest within the County's jurisdiction occur within an existing mitigation area, and depending upon negotiations with the wildlife agencies, mitigation for those impacts could be as high as 6:1.

plant palette; planting methodology; irrigation requirements; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures including invasive plant species control measures to implement should exotic species become established. The revegetation plan will stipulate that project landscaping will not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. Following the completion of construction activities, the restoration plan will be implemented for a minimum of 5 years, unless success criteria are met earlier and all artificial water has been off for at least 2 years. The City of Chula Vista will be responsible for developing and implementing the revegetation plan.

BIO-10: The limits of project impacts (including construction staging areas and access routes) will be clearly delineated with bright orange plastic fencing, stakes, flags, or markers that will be installed in a manner that does not impact habitats to be avoided and such that they are clearly visible to personnel on foot and operating heavy equipment. This delineation will be conducted under the supervision of the City-approved biologist prior to commencement of construction activities and will remain in place during all construction activities. All temporary ESA fencing will be shown on grading plans and/or associated construction documents. If work occurs beyond the fenced or demarcated limits of impact, all work will cease until the problem has been remedied to the satisfaction of the City's Development Services Director (or their designee). Temporary construction fencing and markers will be maintained in good repair until the completion of project construction and removed upon project completion. The City of Chula Vista will be responsible for clearly delineated the project limits.

BIO-11: A City-approved biologist will be on-site during: a) initial clearing and grubbing; and b) weekly during project construction within 61 meters (m) [200 feet (ft)] of off-site California gnatcatcher and least Bell's vireo habitat to ensure compliance with all conservation measures. The City-approved biologist will be familiar with the habitats, plants, and wildlife in the project area to ensure that issues relating to biological resources are appropriately and lawfully managed. The City of Chula Vista will be responsible for having the City-approved biologist on-site.

BIO-12: Staging areas during construction will be located on property occupied by the Chula Vista Municipal Golf Course east of the existing bridge and outside of the riparian habitat. Construction vehicle access will be limited to those areas absolutely necessary to complete the bridge construction. The City of Chula Vista will be responsible for designating staging areas for construction.

BIO-13: An employee education program will be developed prior to construction. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program prior to working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area (including photographs), their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these

species and promote continued successful occupation of the project area. Employees will also be informed on the importance of weed control and the measures needed to minimize their spread. The City of Chula Vista will be responsible for developing the employee education program.

BIO-14: The project site will be kept as clean of debris as possible during construction. All food-related trash items will be enclosed in sealed containers and regularly removed from the site. The City of Chula Vista will be responsible for ensuring that the construction team keeps the project site clean.

BIO-15: Project personnel will be prohibited from bringing domestic pets to construction sites to ensure that domestic pets do not disturb or depredate wildlife in adjacent native habitats during construction. The City of Chula Vista will be responsible for ensuring that domestic pets are not brought on-site.

BIO-16: Siltation and erosion control BMPs will be implemented during construction, including boundary silt fencing, gravel bags, fiber rolls, weed-free straw wattles and mulch, and slope stabilization. Runoff from the pavement of the newly constructed bridge and ramps will drain to pervious concrete. Additional siltation and erosion control BMPs to be implemented are described in mitigation measure HYDRO-1. The City of Chula Vista will be responsible for implementing these siltation and erosion control BMPs.

BIO-17: All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will occur in designated areas outside of the two branches of the Sweetwater River within the fenced project impact limits during construction. These designated areas will be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering waters of the U.S. and will be shown on the construction plans. Fueling of equipment will take place within existing paved areas or designated fueling areas designed to contain fuel drips and farther than 100 feet from waters of the U.S. Contractor equipment will be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" will be designated on construction plans and/or within the stormwater pollution prevention plan. All equipment will be cleaned prior to utilization in sensitive habitats and all cleared vegetation will be disposed of off-site. The City of Chula Vista will be responsible for implementing restrictions on equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities.

BIO-18: Impacts from fugitive dust will be avoided and minimized through application of water or an approved biodegradable dust palliative (e.g., chloride compounds, lignin derivatives, resinous adhesives), reduced speeds on unpaved roads, perimeter erosion and sedimentation controls, revegetation or stabilization of disturbed areas as soon as feasible, or other measures considered appropriate by the City during construction (see also AIR-1). The City of Chula Vista will be responsible for enforcing fugitive dust control measures.

BIO-19: If project lighting is required, a lighting plan / photometric analysis shall be submitted to the satisfaction of the Development Services Director (or their designee) to ensure project

lighting (including temporary construction and/or permanent) has been directed away from biologically sensitive areas, wherever feasible and consistent with public safety. The lighting plan shall be developed prior to the commencement of any construction related activities and illustrate the location of the proposed lighting standards and, if applicable, type of shielding measures required to minimize light spillage into the preserve. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and special status species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting. The City of Chula Vista will be responsible for developing the lighting plan/photometric analysis.

BIO-20: Cut and fill will be balanced within the project or the construction contractor will identify the source or disposal location prior to construction. All spoils and material disposal will be disposed of properly during construction. The City of Chula Vista will be responsible for ensuring that cut and fill will be balanced and disposed of properly during construction.

BIO-21: The City of Chula Vista will notify bidding contractors about the biological resources and constraints associated with the proposed project prior to award of the construction contract.

BIO-22: The City-approved biologist will submit a final report to the City of Development Services Director (or their designee) within 120 days of project completion including photographs of impact areas and adjacent habitat, documentation that authorized impacts were not exceeded, and documentation that general compliance with all conservation measures was achieved. The report will specify numbers, locations, and sex of California gnatcatchers and least Bell's vireos (if observed), observed California gnatcatcher and least Bell's vireo behavior (especially in relation to project activities), and remedial measures employed to avoid and minimize impacts to California gnatcatchers and least Bell's vireos. Raw field notes should be available upon request by the City's Development Services Director (or their designee). The City of Chula Vista will be responsible for submitting this final report.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

**Less-than-Significant Impact with Mitigation Incorporated.**

**Riparian Habitats**

Southern Cottonwood-Willow Riparian Forest

As shown in Table 3.4-1, implementation of the proposed project would permanently impact 0.442 acre of southern cottonwood-willow riparian forest and temporarily impact 0.468 acre of southern cottonwood-willow riparian forest. This is a potentially significant impact. However, implementation of mitigation measures BIO-3 and BIO-4 would mitigate this impact to a level

less than significant. Additionally, implementation of mitigation measures BIO-8 through BIO-15 would prevent additional indirect impacts to southern cottonwood-willow riparian forest.

#### Coastal and Valley Freshwater Marsh

As shown in Table 3.4-1, implementation of the proposed project would not directly impact the 0.033 acre of coastal and valley freshwater marsh located within the project area. Implementation of mitigation measures BIO-8 through BIO-15 would prevent indirect impacts to coastal and valley freshwater marsh.

### **Upland Habitats**

#### Coastal Sage Scrub

As shown in Table 3.4-1, implementation of the proposed project would temporarily impact 0.055 acre of coastal sage scrub south of the intersection of Willow Street and Sweetwater Road during construction. This is a potentially significant impact. However, implementation of mitigation measures BIO-1 and BIO-2 would mitigate this impact to a level less than significant.

- c) **Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**Less-than-Significant Impact with Mitigation Incorporated.** Wetlands may be regulated by several different agencies or jurisdictions. Each agency or jurisdiction defines wetlands differently. Consequently, a given wetland may have more than one jurisdictional boundary. Such is the case with the wetlands and/or riparian habitats within the project area. Federally defined wetlands fall under the jurisdiction of the ACOE and RWQCB, while state-defined wetlands fall under the jurisdiction of the CDFG. Impacts to these wetlands must be quantified, mitigation measures must be developed and implemented, and permits must be obtained from the appropriate regulatory agency.

Table 3.4-2 shows the temporary and permanent impacts to jurisdictional wetlands and waters of the U.S. within the project area. Additionally, Table 3.4-2 differentiates these wetlands impacts by jurisdiction. Based upon the wetland delineation conducted, there are approximately 0.179 acre of federal wetlands, 0.017 acre of waters of the U.S., and 1.323 acres of state jurisdictional wetlands within the project area (Table 3.4-2).

### **Federal Wetlands and Waters of the U.S.**

The ACOE regulates impacts to wetlands pursuant to Section 404 of the Clean Water Act (CWA). ACOE wetlands are delineated based on the presence of three criteria: hydric soils, hydrophytic vegetation, and hydrology. Any time a 404 permit is required by the ACOE, a

Section 401 certification, also under the CWA, is required by the RWQCB. Federal wetlands occur within the project area as channels overhung by southern cottonwood-willow riparian forest and as coastal and valley freshwater marsh. No permanent or temporary impacts are proposed to the coastal and valley freshwater marsh habitat. However, temporary and permanent impacts are proposed to the channels overhung by southern cottonwood-willow riparian forest (Table 3.4-2). Temporary impacts would be mitigated through habitat restoration on-site, while permanent impacts would be mitigated at a 3:1 mitigation ratio, with at least a 1:1 component of wetlands creation (Table 3.4-2).

Waters of the U.S. are also protected under the CWA. In nontidal situations, waters of the U.S. are delineated by the ordinary high water mark (OHWM), defined as “the line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural lines impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation or presence of litter and debris.” The waters of the U.S. occur within the project area as unvegetated channels that pass through a culvert, under a foot bridge, and under the existing Willow Street Bridge. Impacts to waters of the U.S. would be temporary and indirect (i.e., no piers within waters of the U.S.). This is a potentially significant impact. However, implementation of mitigation measures BIO-7 would mitigate this impact to a level less than significant. Additionally, the proposed project would be required to obtain 401 certification from the RWQCB and a 404 permit from the ACOE to permit the project. Implementation of the wetland restoration and obtaining the permits described above would reduce impacts related to federal wetlands to a level less than significant.

### **State Wetlands**

The CDFG regulates impacts to streams and lakes under Section 1602 of the California Fish and Game Code. CDFG wetlands are delineated based upon the presence of one or more of the criteria used by ACOE: hydric soils, hydrophytic vegetation, and hydrology. State jurisdictional wetlands within the project area consist of 1.469 acres of southern cottonwood-willow riparian forest. These impacts include 0.755 acre of temporary impacts associated with construction and 0.442 acre of permanent impacts associated with widening the bridge. Temporary impacts will be mitigated for by restoration of the 0.755 acre on-site, while permanent impacts would be mitigated at a 3:1 mitigation ratio, with at least a 1:1 component of wetlands creation. Additionally, the proposed project would be required to obtain a 1602 Streambed Alteration agreement from CDFG to permit the project. Implementation of the wetland restoration and obtaining the 1602 permit would reduce impacts related to state wetlands to a level less than significant.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

**Less-than-Significant Impact.** The proposed project is situated within the lower Sweetwater River Valley. Regionally, the Sweetwater River Valley serves as an important wildlife corridor



connection between Sweetwater Reservoir and San Diego Bay. In the City's Subarea Plan, the Sweetwater River Valley is identified as a "significant biological linkage." Although the Chula Vista Municipal Golf Course to the northeast of the bridge narrows the linkage. Within the golf course, the Sweetwater River has been reduced to a highly manicured channel with little tree canopy. Any wildlife moving upstream would find the golf course to be a choke point. Immediately to the southwest of the bridge is a wider swath of riparian habitat managed as the Sweetwater Valley Regional Park, and the riparian and wetland habitats on either side of the existing Willow Street Bridge provide cover and foraging opportunities for wildlife species utilizing this corridor within the Sweetwater River Valley.

Replacement of the existing bridge would reduce the number of piers in the river valley and would only cause minimal permanent impacts to the sensitive habitats within the project area (< 0.5 acre). The existing equestrian trail crossing under the bridge associated with the Sweetwater Regional Park would remain open during construction, which would effectively keep the wildlife corridor open as well. Therefore, the proposed project is not anticipated to change the amount of, or the manner in which, wildlife utilize the corridor in this section of the river valley either during construction or after completion of the project, and impacts to wildlife corridors would be less than significant.

**e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**Less-than-Significant Impact with Mitigation Incorporated.** As described in the environmental setting of this section of the IS/MND (page 3-46), the proposed project has been designed to be consistent with the City's MSCP Subarea Plan and HLIT Ordinance. The proposed project meets the requirements of the HLIT Ordinance based on the following findings:

*Finding: The proposed development in the project area and associated mitigation is consistent with the Chula Vista MSCP subarea plan, as adopted on May 13, 2003, and as may be amended from time to time, the MSCP implementation guidelines, and the development standards set forth in the Chula Vista Municipal Code 17.35.100.*

Rationale for Finding: The proposed project is located within a Development Area as mapped in the City's MSCP Subarea Plan. Due to the constraints of the ROW, unavoidable impacts to natural upland and wetland habitats not containing narrow endemics are necessary. Avoidance measures (including placement of staging areas within existing developed areas), mitigation measures (such as preparation of a mitigation and monitoring plan for the revegetation efforts), and mitigation ratios are consistent with the MSCP implementation guidelines and the City's and County's MSCP Subarea Plans. The one exception is that for the temporary impacts to 0.055 acre of Tier II habitat, a 1:1 mitigation ratio has been proposed, rather than a 1.5:1 ratio. This ratio seems appropriate given the minimal and temporary nature of the impacts.

*Finding: The project area is physically suitable for the design and siting of the proposed development, and the development results in minimum disturbance to sensitive biological resources, except impacts to natural vegetation in mapped development areas.*

Rationale for Finding: The proposed project is located within a Development Area as mapped in the City's MSCP Subarea Plan. The Willow Street Bridge currently exists as a two-lane bridge and this project simply proposes widening of the bridge to a four-lane structure.

*Finding: The nature and extent of mitigation required as a condition of the permit is reasonably related to and calculated to alleviate negative impacts created in the project area.*

Rationale for Finding: Implementation of the mitigation measures described in Sections 3.4a through 3.4c above would reduce impacts to a level less than significant.

For projects within the City that impact wetlands, the following specific findings must also be made:

*Finding: Prior to issuance of a land development permit or clearing and grubbing permit, the project proponent will be required to obtain any applicable state and federal permits, with copies provided to the director of planning and building, or his/her designee.*

Rationale for Finding: The project would be conditioned such that a 404 Permit from the ACOE, a 401 certification from the RWQCB, a 1602 agreement from the CDFG, and a Biological Opinion from the USFWS would be obtained prior to issuance of a land development permit and/or a clearing and grubbing permit.

*Finding: Impacts to wetlands have been avoided and/or minimized to the maximum extent practicable, consistent with the city of Chula Vista MSCP Subarea Plan section 5.2.4.*

Rationale for Finding: Impacts to wetlands have been limited to the extent feasible through project design. Staging areas have been confined to existing developed areas, including the adjacent golf course. Wetlands that would not be impacted would be fenced off during construction and labeled as ESAs to ensure that they were preserved during construction.

*Finding: Unavoidable impacts to wetland have been mitigated pursuant to Chula Vista Municipal Code 17.35.110.*

Rationale for Finding: Mitigation ratios for impacts to wetlands are consistent with the ratios set forth in Section 5.2.4 of the City's MSCP Subarea Plan.

Based on the rationale provided above, the proposed project would be consistent with the City's HTIL Ordinance and impacts to local policies or ordinances would be mitigated to a level less than significant.

- f) **Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**Less-than-Significant Impact with Mitigation Incorporated.**

Chula Vista Multiple Species Conservation Program Subarea Plan

The proposed Willow Street Bridge replacement project is located within a Development Area as mapped in the City's MSCP Subarea Plan. Due to the constraints of the ROW, impacts to natural upland and wetland habitats not containing narrow endemics are unavoidable. Avoidance measures (including placement of staging areas within existing developed areas), mitigation measures (such as preparation of a mitigation and monitoring plan for the revegetation efforts), and mitigation ratios are consistent with the MSCP implementation guidelines and the City's and County's MSCP Subarea Plans. The one exception is that for the temporary impacts to 0.055 acre of Tier II habitat, a 1:1 mitigation ratio has been proposed, rather than a 1.5:1 ratio. This 0.055 acres of Tier II habitat is located within the County of San Diego. Impacts to the wetlands have been limited to the permanent impacts associated with widening the bridge and the necessary temporary impacts for construction activities to widen the bridge. Staging areas have been confined to existing developed areas, including the adjacent golf course. Wetlands that are being avoided would be fenced during construction and labeled as ESAs. Additionally, the mitigation ratios for impacts to wetlands are consistent with the ratios set forth in Section 5.2.4 of the City's MSCP Subarea Plan. Implementation of the mitigation measures identified in Section 3.4 would reduce impacts to biological resources to a level less than significant. Therefore, the proposed project would be consistent with the Chula Vista MSCP Subarea Plan.

South County Multiple Species Conservation Program Subarea Plan

Mitigation measures described in Sections 3.4a through 3.4c would meet the mitigation requirements of the South County MSCP Subarea Plan and the County of San Diego BMO. Since the County of San Diego land impacted by the proposed project is classified as a "Take Authorized Area," no additional biological mitigation is required related to the MSCP. However, additional mitigation would be required for 0.287 acre of impacts to the Sweetwater Offsite Mitigation Area (SWOMA) due to its status as a mitigation site. The City is currently negotiating with the resource agencies to determine the mitigation ratios for temporary impacts to the SWOMA. These ratios may be as high as 6:1 depending on the outcome of negotiations with the resource agencies. Implementation of these mitigation measures would ensure that the proposed project would be consistent with the South County Segment MSCP Subarea Plan.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
<b>3.5</b>	<b>CULTURAL AND PALEONTOLOGICAL RESOURCES.</b>				
	Would the project:				
	a) Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## ENVIRONMENTAL SETTING

A records search was conducted at the South Coastal Information Center (SCIC) at San Diego State University for a 1-mile radius of the project area on August 3, 2005, and again on November 2, 2009, by SCIC staff. The records search included an examination of a range of materials including the National Register of Historic Places (NRHP), California Register of Historical Resources, California Inventory of Historic Resources, California Historical Landmarks, the National Archaeological Database, and historic topographic and survey maps. The records search indicated that the project area has been inventoried previously at least twice for cultural resources. The previous inventories occurring in the area of potential effects (APE) were more than 5 years old. Because these investigations are greater than 5 years in age, an updated survey of the area was needed to address current conditions and methods. At least 36 archaeological investigations have been conducted within a 1-mile radius of the project area. Most of these have been surveys associated with development in the region. At least six of the previous studies have covered some portion of the APE, which was previously surveyed in its entirety. A total of nine cultural resources are recorded within a 1-mile radius of the APE. These are mostly prehistoric sites located on the hills overlooking the river and include a large habitation site located one-half mile southeast of the APE. However, none of these cultural resources were located within the APE.

A Native American contact program was conducted, which involved sending letters to Native American tribes potentially interested in, or knowledgeable about, cultural resources in the project area. The letters were sent out January 15, 2006, and were followed up with telephone calls on March 6, 2006. No responses were received to the letters and no concerns were raised in the follow-up phone calls. An additional request was sent to the Native American Heritage

Commission (NAHC) on October 30, 2009, for a search of its Sacred Lands files for cultural resources within the APE and a 1-mile radius. Mr. David Singleton sent a response on November 10, 2009. No sacred lands are known by the NAHC to be present in the APE. The NAHC provided a contact list of Native American tribes and individuals who might have information about the vicinity. These 14 individuals were contacted by letter and no responses were received. Follow-up phone calls were made on December 22, 2009.

## DISCUSSION

**a) Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines § 15064.5?**

**No Impact.** A Historic Property Survey Report (HPSR) was prepared that evaluated whether the proposed project would affect properties listed on the NRHP. The proposed project would only affect the existing Willow Street Bridge and would not impact any other structures near the project area. Therefore, the existing Willow Street Bridge is the only potentially historic resource that could be impacted by the proposed project. The HPSR concluded that the proposed project was not listed in the NRHP. Additionally, the HPSR concluded that the existing Willow Street Bridge is not eligible for listing in the NRHP. The City has not locally designated the existing Willow Street Bridge as a historic resource. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource.

**b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines § 15064.5?**

**Less-than-significant Impact with Mitigation Incorporated.** A cultural resource survey of the APE was conducted by Tierra on December 4, 2005, November 29, 2009, and May 3, 2011. An attempt was made to use 10- to 15-m interval transects during all three surveys. However, conducting meandering transects through dense brush was required at times. The ground surface was largely obscured by vegetation and leaf litter. However, there were some open areas and trails that allowed visual inspection of the ground surface. Overall, visibility was approximately 20 percent. The vegetation did not hinder transecting, only visibility. The entire APE was covered by the survey. The APE is largely comprised of the river bottom, the edges of the riverbanks, and previously developed areas. No archaeological resources were located during the surveys of the project area. The HPSR prepared for the proposed project concluded that monitoring for archaeological resources during construction would not be necessary. However, should archaeological resources be discovered during construction, implementation of mitigation measure CULT-1 would reduce impacts to archaeological resources to a level less than significant. Therefore, the proposed project would not cause a substantial adverse change in the significance of an archaeological resource.

CULT-1: If any archaeological resources, paleontological resources, or human remains are discovered during construction, work will be diverted from the location of the find until a qualified specialist is able to assess the significance and nature of the find. If the find is considered potentially significant, a testing and evaluation program will be developed and will

include measures for cataloging and curating any potential finds. Implementation of mitigation measure CULT-1 would reduce impacts to a level less than significant.

**c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**Less-than-significant Impact with Mitigation Incorporated.** No paleontological resources were located during the survey of the project area. The HPSR prepared for the proposed project concluded that monitoring during construction would not be necessary. However, should paleontological resources be discovered during construction, implementation of mitigation measure CULT-1 would reduce impacts to paleontological resources to a level less than significant. Therefore, the proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

**d) Disturb any human remains, including those interred outside of formal cemeteries?**

**Less-than-significant Impact with Mitigation Incorporated.** No human remains were discovered during the survey of the project area. The HPSR prepared for the proposed project concluded that monitoring during construction would not be necessary. However, should human remains be discovered during construction, implementation of mitigation measure CULT-1 would reduce impacts related to the discovery of human remains to a level less than significant. Therefore, the proposed project would not impact any human remains, including those interred outside of formal cemeteries.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.6</b>	<b>GEOLOGY AND SOILS.</b> Would the project:				
	a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Be located on expansive soil, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## ENVIRONMENTAL SETTING

Geocon Inc. prepared a geotechnical investigation that evaluated the general subsurface geology and geotechnical conditions of the project area to provide geotechnical recommendations for the proposed project. The topography of the project site slopes gently toward the river channel. Ground surface elevations along the roadway alignment range from approximately 70 feet above Mean Sea Level (MSL) at the north end of the bridge to approximately 57 feet MSL at the channel invert. The geology of the site is referenced from the Geology of National City, Imperial Beach and Otay Mesa Quadrangles, Southern San Diego Metropolitan Area, California (Kennedy and Tan 1977). The geologic map indicates the project site is predominantly underlain by alluvium and stream-terrace deposits over Mission Valley Formation. No landslides were encountered during the site investigation, and none are known to exist where the replacement bridge would be constructed. No igneous or metamorphic bedrock were encountered during field investigation at the project site. One sedimentary unit, the Mission Valley Formation, was encountered and is described below.

### Project Site Soils

The location where the replacement bridge would be constructed is generally underlain by alluvial and stream-terrace deposits over Mission Valley Formation. Undocumented fill soils were also encountered at shallow depths in several borings. The soil conditions encountered are described in detail below.

#### *Undocumented Fill (Qudf)*

Undocumented fill soils were encountered in six of the nine borings drilled during the field investigation. The fill soils were likely placed during the original constructions of the existing bridge, roadway embankments, river channelization, and adjacent improvements. The majority

of the fill is characterized as loose to medium dense silty sand with gravel. Difficult drilling conditions were encountered in undocumented fill in Boring B-2 where riprap was present locally. The thickness of undocumented fill ranges between approximately 1 foot and 12 feet.

#### *Alluvium (Qal)*

Alluvium was encountered in eight of the nine borings. The alluvium consists primarily of loose to medium dense silty sand and clayey sand with gravel. Scattered thin layers of soft to firm clay and sandy clay were also encountered within the alluvium. The thickness of the alluvium within the main part of the river channel ranges between approximately 42 and 62 feet. The loose and saturated portions of alluvium are highly susceptible to liquefaction in the event of a major earthquake.

#### *Older Alluvium (Qoal)*

Older alluvium was encountered underlying the recent alluvial deposit in Borings B-1, B-2, and B-3. This material generally consists of dense to very dense silty sand with varying amounts of gravel. Older alluvium is generally considered an appropriate bearing layer for the support of deep foundations. Difficult drilling conditions were encountered in the older alluvium and caused refusal in Boring B-3 at a depth of 74 feet below existing grade.

#### *Terrace Deposits (Qt)*

Terrace deposits were encountered in Borings B-4 and B-9 drilled near the north bridge abutment. As encountered in the boring, the deposits are characterized as loose to medium dense silty sand and clayey sand with a trace of gravel. The terrace deposits are unsuitable in their present condition for the support of the proposed bridge and roadway.

#### *Mission Valley Formation (Tmv)*

Mission Valley Formation was encountered underlying the alluvium and terrace deposits in six borings. This formation generally consists of very dense clayey sand, silty sand, and hard silty clay and clayey silt. Although not encountered in borings, this unit is expected to underlie the older alluvium in Borings B-1, B-2, and B-3.

### **Groundwater**

Groundwater was not directly observed during the field investigation due to the use of drilling fluids for mud rotary borings. However, saturated soil samples encountered in the borings taken at the project site indicated that the groundwater surface elevation is near the water level in the active river channel of about 58 feet MSL. The groundwater levels are expected to fluctuate with the water level in the river. Construction of the proposed improvements may be significantly less difficult if performed during the dry season.

## DISCUSSION

a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:**

i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**

**No Impact.** The geotechnical analysis performed for the proposed project revealed that the project site is not located within an Alquist-Priolo Earthquake Study Zone as established by the State Geologist around known active faults. Similarly, review of available literature and field reconnaissance revealed no active fault trace through or near the site.

ii) **Strong seismic ground shaking?**

**Less-than-significant Impact.** Based on the Caltrans online fault map and accompanying reports, the project site is located approximately 5.9 miles (9.4 kilometers) east of the Newport-Inglewood-Rose Canyon fault zone (Silver Strand-Downtown Graben fault). Geocon performed both deterministic and probabilistic response spectrums of the project site. Based on these analyses, Geocon prepared a Recommended Design Response Spectrum for the replacement bridge, which would allow the bridge to withstand seismic ground shaking related to the Newport-Inglewood-Rose Canyon fault zone or any other fault that could affect the proposed project. Therefore, impacts related to strong seismic ground shaking would be less than significant.

iii) **Seismic-related ground failure, including liquefaction?**

**Less-than-significant Impact.** Liquefaction is a phenomenon in which loose, saturated and relatively cohesionless soil deposits located beneath the groundwater table lose strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground accelerations, characteristics of the subsurface soil, in situ stress conditions, and depth to groundwater. Geocon evaluated the potential for liquefaction using the methodology of the National Center for Earthquake Engineering Research, which indicated that the potentially liquefiable zones within the alluvial deposits may vary along the bridge alignment. Additionally, the geotechnical evaluation concluded that alluvial deposits beneath the Sweetwater River channel are highly susceptible to liquefaction.

The potential effects of liquefiable soils were incorporated into the foundation recommendations of the geotechnical investigation, which concluded that deep foundations should be utilized in order to avoid the potential for liquefaction. A detailed discussion of the foundations needed for the replacement bridge and other design recommendations are provided in the geotechnical report prepared by Geocon. Utilization

of deep foundations and adherence to other design recommendations provided in the geotechnical investigations report would reduce impacts related to ground failure to a level less than significant.

**iv) Landslides?**

**No Impact.** The proposed project site is generally flat and is not located near any steep slopes subject to landslides. Additionally, the site investigation conducted for the geotechnical analysis did not find any potential landslide areas on-site and none are known to exist at the location where the replacement bridge would be constructed. Therefore the proposed project would not be subject to landslides.

**b) Result in substantial soil erosion or the loss of topsoil?**

**Less-than-significant Impact.** Construction activities associated with the project would temporarily disturb soils and introduce the potential for erosion. However, the proposed project site is relatively flat and does not have the potential for large amounts of erosion. Implementation of BMPs identified in the Water Quality Technical Report (WQTR) prepared for the proposed project would prevent erosion. The types of BMPs that may be used include, but are not limited to, silt fencing, fiber rolls, street sweeping and vacuuming, storm drain inlet protection, stockpile management, desilting basins, gravel bag berms, and sandbag barriers. Additionally, any minor slopes created incidental to construction that are not subject to a major or minor grading permit would be protected by covering the slope with plastic or tarp prior to a rain event and would have vegetative cover reestablished within 180 days of completion of the slope prior to final building approval.

Runoff from the existing bridge's on-site drainage is discharged directly to the Sweetwater River, either as sheet-flow runoff from the pavement or through existing culverts connected to cross culverts. Proposed drainage for the replacement bridge would follow similar drainage patterns. The potential for additional erosion from the replacement bridge is considered negligible, due to the relatively small amount of pavement that would be added by the proposed project and the narrow grading footprint. Therefore, impacts related to soil erosion or the loss of topsoil would be less than significant.

**c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

**Less-than-significant Impact.** The geotechnical analysis analyzed the potential for lateral spreading at the project site and concluded that earthquake-induced horizontal ground displacement would be less than 0.5 inch. Therefore, the potential for lateral spreading at the project site is considered very low. Seismic-induced settlement may occur in areas underlain by liquefiable soils, unconsolidated alluvial deposits, and/or loose granular soils. As described in section 3.6a(iii) above, the geotechnical investigations report concluded that alluvial deposits

beneath the Sweetwater River channel are highly susceptible to liquefaction. The effects of liquefiable soils were incorporated into the foundation recommendations of the geotechnical investigation, which concluded that deep foundations should be utilized in order to avoid the potential for liquefaction. A detailed discussion of the foundations needed for the replacement bridge and other design recommendations are provided in the geotechnical report prepared by Geocon. Utilization of deep foundations and adherence to other design recommendations provided in the geotechnical investigations report would reduce impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse to a level less than significant.

**d) Be located on expansive soil, creating substantial risks to life or property?**

**Less-than-significant Impact.** As described in section 3.6a)iii) above, the geotechnical investigations report concluded that the potentially liquefiable zones within the alluvial deposits may vary along the bridge alignment and that alluvial deposits beneath the Sweetwater River channel are highly susceptible to liquefaction, which could in turn result in soil expansion. The potential effects of liquefiable soils were incorporated into the foundation recommendations of the geotechnical investigation, which concluded that deep foundations should be utilized in order to avoid the potential for liquefaction. A detailed discussion of the foundations needed for the replacement bridge and other design recommendations are provided in the geotechnical report prepared by Geocon. Utilization of deep foundations and adherence to other design recommendations provided in the geotechnical investigations report would reduce impacts related to expansive soil to a level less than significant.

**e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

**No Impact.** The proposed project would not require the use of septic tanks or alternative waste water disposal systems. Therefore, no impact related to the use of septic tanks or other wastewater disposal systems would result.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.7</b>	<b>HAZARDS AND HAZARDOUS MATERIALS.</b> Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## ENVIRONMENTAL SETTING

Ninyo and Moore prepared an Initial Site Assessment (ISA) to document, to the extent feasible, Recognized Environmental Conditions (RECs), defined by ASTM E1527-05 as “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.” Potential RECs documented during this assessment were evaluated as to whether they would be considered evidence of a REC or a de minimis environmental condition, which is defined by ASTM E1527-05 as a condition that generally does not “present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.”



Site reconnaissance revealed that several groundwater monitoring wells were located adjacent to the project site and a 6-inch natural gas pipeline ran along the underside of the existing Willow Street Bridge. Several storm water drainage inlets are located on the east side of Bonita Road and overhead power lines and utility poles run along Sweetwater Road and continue along the west side of the Willow Street Bridge. A pole-mounted transformer was noted on one of the poles. Preparation of the ISA also included a review of historical documents such as aerial photographs, reverse street directories, and fire insurance maps, as well as regulatory databases on the locations of known hazardous materials. Based on the research activities conducted for this ISA, the following evidence of RECs was noted to be associated with the project area.

- The 76 gas station located adjacent to the southwest of the project area is the subject of an open unauthorized release case under the oversight of the County of San Diego Department of Environmental Health (DEH) due to petroleum impacts to soil and groundwater. According to a recent groundwater monitoring report, depth to groundwater is generally less than 10 feet below ground surface (bgs), and the direction of groundwater flow is to the southwest (away from the project area). Constituents of concern, such as total petroleum hydrocarbons as gasoline (TPH-g), methyl tertiary butyl ether (MTBE), and benzene continue to be detected in groundwater samples collected from wells on the gas station property and on downgradient properties. The DEH has required that the lateral extent of groundwater impacts be delineated to the west and south. TPH-g, MTBE, and benzene were not detected in monitoring well MW-3, located in the northern portion of the property in the direction of the project area. However, these constituents were detected in MW-7, located in the southeastern portion of the property, closest to the portion of the project area that consists of the intersection of Willow Street and Bonita Road. Based on these detections, the fact that the lateral extent of the groundwater plume has not been delineated, and the shallow depth to groundwater, it is possible that soil and/or groundwater at the project area has been impacted by the release.
- The property on the northern corner of the intersection of Bonita Road and Willow Street, adjacent to the northeast of the project area, was formerly developed with a fire station. Historical records indicate that this property was also likely developed as a gas station. Although not listed on regulatory databases as an unauthorized release site, it is likely, based on its historical usage, that this property was formerly associated with fuel storage, possibly in underground storage tanks, which may have impacted soil and/or groundwater at the project area.
- A dry cleaner was formerly located approximately 225 feet east-northeast of the project area from the 1960s until as recently as 2009 (based on reverse street directories). The dry cleaning facility was not listed on databases reporting unauthorized releases of hazardous materials and/or wastes, and violations were not noted in DEH annual inspection reports dated 1999 through 2006. However, based on its long-term operation near the project area since the 1960s, and the shallow depth to groundwater (generally less than 10 feet bgs), it is possible that groundwater at the project area would be impacted if a release occurred.

The following are not considered to be RECs per the Caltrans guidance but should be considered.

- A 6-inch natural gas pipeline runs along the underside of the Willow Street Bridge, which may be associated with asbestos-containing pipe insulation or lagging. Components of the existing Willow Street Bridge may be associated with suspect asbestos-containing materials (e.g., bridge joint and piping material). Other asbestos-containing materials may be present within the project area, including pipe insulation on natural gas lines and cementitious water lines (e.g., transite).
- Electrical transformers can be a source of polychlorinated biphenyls (PCBs). The transformers in the project area are owned and operated by San Diego Gas and Electric (SDG&E), which states that it is responsible for ensuring that its transformers comply with applicable regulations. SDG&E states that it is unlikely that its transformers, such as those in the project area, are PCB-contaminated. However, sampling and analysis of transformer fluid would be necessary to evaluate PCB content.
- Painted curbs, poles, and roadway striping were noted in the street ROW and may contain lead-based paint. Other lead-based paint may be present within the project area, such as on the existing Willow Street Bridge.
- Treated wood and/or materials falling under the universal waste rule (UWR) requirements, including but not limited to potentially mercury-containing switches and fluorescent light tubes, potentially PCB-containing light ballasts, and hi-intensity vapor lights and associated ballasts, may be present at the project area.

## DISCUSSION

### a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Less-than-significant Impact.** Construction of the proposed project may require the use of hazardous materials (fuels, lubricants, solvents, etc.) that would require proper storage, handling, use, and disposal. The use of hazardous materials associated with the proposed project would be in accordance with BMPs identified in the WQTR, such as vehicle and equipment maintenance, material delivery and storage, and spill prevention and control. Compliance with these BMPs and all other regulatory requirements would provide guidelines for the handling, transport, and disposal of hazardous waste and would minimize impacts related to the release of hazardous materials into the environment during construction activities. Once construction was complete, the proposed project would allow vehicular traffic to flow along the replacement bridge. This traffic could include the routine transport of hazardous materials, but such transport would not be directly associated with the bridge project. Therefore, impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant.

- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

**Less-than-significant Impact.** Construction of the proposed project may require the use of hazardous materials (fuels, lubricants, solvents, etc.) that would require proper storage, handling, use, and disposal. Compliance with BMPs described in Section 3.7a above and all other regulatory requirements would minimize impacts related to the release of hazardous materials into the environment during construction activities. The proposed project was designed to meet all applicable design standards related to safety and, therefore, would either meet or improve upon existing levels of safety for the existing Willow Street Bridge and its corresponding intersections. Therefore, implementation of the proposed project would not increase design hazards or create new design hazards that could result in the release of hazardous materials into the environment.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

**Less-than-significant Impact.** The Vista Valley Elementary School is located approximately 0.1 mile northwest of the proposed project and could be affected by hazardous materials associated with construction of the proposed project. However, compliance with BMPs described in Section 3.7a above and all other regulatory requirements would minimize impacts related to the release of hazardous materials into the environment during construction activities. Once construction was complete, the proposed project would allow for vehicular traffic to flow along the replacement bridge. Such traffic might include the routine transport of hazardous materials, but such transport would not be directly attributable to the bridge project. Therefore, impacts to schools within 0.25 mile of the proposed project would be less than significant.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**Less-than-significant Impact with Mitigation Incorporated.** As describe above, evidence of several RECs, which may have impacted soil and/or groundwater within the project area, was discovered during preparation of the ISA. Additionally, construction of the proposed project would encounter other potentially hazardous materials such as the 6-inch natural gas pipeline, electrical transformers, lead-based paint, and treated wood. Therefore, the proposed project would be located on a site potentially containing hazardous materials. Implementation of mitigation measures HAZ-1 through HAZ-10 would reduce these impacts to a level less than significant.

HAZ-1: A site and community health and safety plan and worker training shall be implemented for subsurface excavation activities to manage potential health and safety hazards to workers and the public.

HAZ-2: For project construction activities involving excavation, grading, or other subsurface disturbance, a soil and groundwater management plan shall be prepared and implemented to address the possibility of encountering areas of potential environmental concern. The plan shall be prepared by a qualified environmental consultant and shall be implemented during subsurface disturbance activities by the contractor under the oversight of an environmental professional on behalf of the project proponent. The plan shall address soil and groundwater monitoring, handling, stockpiling, characterization, on-site reuse, export, and disposal protocols. The objective of the plan is to assist the contractor in the excavation, notification, monitoring, segregation, characterization, handling, and reuse and/or disposal (as appropriate) of waste that may be encountered during earthwork activities.

HAZ-3: Groundwater monitoring wells were not noted to be located within the project area, based on the site reconnaissance or review of regulatory records. However, if wells are proposed to be disturbed during project improvements, the project proponent shall coordinate with the responsible party and/or regulatory agency for the wells to evaluate their appropriate abandonment or relocation.

HAZ-4: Based on the shallow depth to groundwater, the potential impact of contaminated groundwater at the project area shall be considered if dewatering activities are planned for the construction of proposed improvements. Dewatering activities may be subject to increased disposal costs or other environmental surcharges (e.g., permitting) as a result of the presence of contaminated groundwater. A discharge permit may be required for dewatering, and water may need to be characterized and treated prior to discharge.

HAZ-5: Appropriate worker and community health and safety measures (e.g., dust control, air monitoring, stockpile management) shall be implemented by the contractor, under the oversight of a qualified environmental professional, during subsurface disturbance activities in areas suspected of being associated with subsurface contamination.

HAZ-6: Appropriate references to the potential to encounter contaminated soils and/or groundwater shall be included in construction specifications so that the contractor can consider various factors (e.g., soil disposal, dewatering costs) that would affect the work.

HAZ-7: Soil and/or groundwater generated during construction activities (e.g., subsurface excavation) may require chemical characterization (e.g., analytical testing) by a qualified environmental professional prior to reuse, export, or disposal. Additional assessment (e.g., sampling of stockpiles) may be warranted to evaluate the nature and extent of impacts to soil and/or groundwater prior to reuse, export, or disposal.

HAZ-8: Further assessment performed by a qualified environmental professional is recommended if soil or groundwater suggestive of contamination (e.g., discoloration, odors) or other potential environmental issues are encountered in the project area during project construction activities. If contamination is discovered, regulatory agencies may require additional environmental investigation and/or mitigation to be conducted, particularly if there is the potential to affect public health, safety, and/or the environment. The County of San Diego

has requested to be notified if evidence of contamination is discovered to the west of the bridge, within the limits of the SWOMA.

HAZ-9: Surveys shall be conducted to evaluate the presence and location of potentially hazardous materials such as asbestos-containing materials, lead-based paint, treated wood, and other materials falling under UWR requirements prior to disturbance of infrastructure with potentially hazardous materials. The surveys shall be conducted by California Department of Public Health Certified Lead Inspector/Assessors, California Division of Occupational Safety and Health Certified Asbestos Consultants, and/or other appropriately qualified professionals in accordance with applicable local, state, and federal guidelines and regulations.

HAZ-10: Prior to removal or demolition of infrastructure with potentially hazardous materials, appropriate abatement measures shall be implemented by a licensed abatement contractor using trained and certified workers and supervisors. Potentially hazardous materials shall be handled and disposed of in accordance with applicable regulations.

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

**No Impact.** The proposed project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Additionally, the proposed project does not include any tall structures or new features that would affect air traffic patterns or introduce new safety hazards related to air traffic. Replacing the existing Willow Street Bridge would not create any new conditions that would jeopardize the safety of people residing or working within the project area, since the elevation of the replacement bridge would be similar to that of the existing bridge. Therefore, implementation of the proposed project would not pose a flight hazard.

- f) **For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

**No Impact.** The proposed project is not located in within the vicinity of a private airstrip. Additionally, the proposed project does not include any tall structures or new features that would affect air traffic patterns or introduce new safety hazards related to air traffic. Replacing the existing Willow Street Bridge would not create any new conditions that would jeopardize the safety of people residing or working within the project area, since the elevation of the replacement bridge would be similar to that of the existing bridge. Therefore, implementation of the proposed project would not pose a flight hazard.

- g) **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**Less-than-significant Impact.** Construction of the proposed project could temporarily affect traffic circulation on the existing Willow Street Bridge. However, Willow Street would remain open with one lane of traffic in each direction throughout the construction process, and a Traffic

Management Plan (TMP) would be prepared and implemented during construction of the proposed project to allow for continued fire and emergency access during construction. Operation of the proposed project would reduce congestion on Willow Street and would reduce response times for fire and emergency services. Therefore, the proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan.

**h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

**Less-than-significant Impact.** The proposed project is surrounded immediately to the west by undeveloped land associated with the Sweetwater Regional Park. Additionally, pockets of undeveloped land covered by vegetation exist throughout the area surrounding the proposed project. These areas could be susceptible to wildland fires. However, replacing the existing Willow Street Bridge would not introduce any new features that would increase the risk of fire beyond the level of risk present in the existing condition. Therefore, impacts related to wildland fires would be less than significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.8</b>	<b>HYDROLOGY AND WATER QUALITY.</b> Would the project:				
a)	Result in an increase in pollutant discharges to receiving waters (including impaired water bodies pursuant to the Clean Water Act Section 303(d) list), result in significant alteration of receiving water quality during or following construction, or violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? Result in a potentially significant adverse impact on groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, or place structures within a 100-year flood hazard area which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## ENVIRONMENTAL SETTING

The proposed project is located within the Sweetwater River watershed (909), which is one of three watersheds within the San Diego Bay watershed area. The Sweetwater River watershed is the largest of the three, encompassing 230 of the approximately 415 square mile total. The most important issues for the Sweetwater River watershed are the protection of municipal water supplies and the protection and restoration of sensitive wetland and wildlife habitats. The proposed project is located within the urbanized Lower Sweetwater watershed (909.1), which encompasses portions of the City of Chula Vista, National City, City of San Diego, La Mesa, and Lemon Grove.

The proposed project crosses a portion of the Sweetwater River. Off-site drainage in the area surrounding the proposed project typically flows into the Sweetwater River, flowing from the northeast to the southwest towards the San Diego Bay. The portion of the Sweetwater River the existing Willow Street Bridge and project area drains into is a highly vegetated portion of the Sweetwater Regional Park. Runoff upstream from the proposed project consists of runoff from Sweetwater Road that has drained into the Chula Vista Municipal Golf Course located upstream from the project area.

## DISCUSSION

- a) **Result in an increase in pollutant discharges to receiving waters (including impaired water bodies pursuant to the Clean Water Act Section 303(d) list), result in**

**significant alteration of receiving water quality during or following construction, or violate any water quality standards or waste discharge requirements?**

**Less-than-significant Impact with Mitigation Incorporated.** The Sweetwater River is not listed as an impaired water body pursuant to the Clean Water Act Section 303(d) list. Construction of the proposed project would have the potential to result in minimal short-term construction-related erosion/sedimentation impacts. Sediment dislodged during construction and hazardous materials used during construction could flow downstream and impact water quality. However, implementation of construction BMPs identified in mitigation measure HYDRO-1 would reduce this impact to a level less than significant. The proposed project would not generate new sources of pollution. However, the potential exists for long term water pollution to result from illegal dumping at on-site storm drain inlets. Implementation of mitigation measure HYDRO-2 would reduce these impacts to a level less than significant.

HYDRO-1: Construction of the proposed project will require implementation of the construction BMPs identified in the water quality technical report prepared for the proposed project (Kimley-Horn and Associates, Inc. 2010), including silt fences, fiber rolls, street sweeping and vacuuming, storm drain inlet protection, stockpile management, solid waste management, stabilized construction entrance/exit, dewatering operations, vehicle and equipment maintenance, de-silting basins, gravel bag berms, sandbag barriers, material delivery and storage, spill prevention control, concrete waste management, waste conservation practices, paving and grading operations to reduce impacts to water quality.

HYDRO-2: All inlets constructed as a part of the proposed project will be marked with the words “No Dumping! Flows to Bay” or similar.

**b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? Result in a potentially significant adverse impact on groundwater quality?**

**No Impact.** The proposed project does not propose the use of groundwater. Furthermore, piles associated with the replacement bridge would represent a minimal increase in the amount of impervious surface within the project area. Therefore, the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

**c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?**

**Less-than-significant Impact.** The Final Hydromodification Plan prepared for the County of San Diego in March 2011 states that if a project is discharging directly to an exempt river reach, the project can be exempt from the hydromodification requirements. The Final

Hydromodification Plan identifies the Sweetwater River as an exempt river reach in San Diego County. Therefore, the proposed project is exempt from hydromodification requirements.

Runoff from the existing bridge is discharged directly to the Sweetwater River, either as sheet-flow runoff from the pavement or through existing culverts connected to cross culverts. Proposed drainage facilities associated with the replacement bridge would follow similar drainage patterns. The potential for erosion from the replacement bridge would be negligible due to the relatively small increase in pavement that would result from the proposed project and narrow grading footprint. The proposed project's impact on the hydrologic regime of downstream receiving waters and habitat integrity would also be negligible due to the relatively small increase in pavement that would result from the proposed project. Therefore, impacts related to erosion or siltation on- or off-site would be less than significant.

- d) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, or place structures within a 100-year flood hazard area which would impede or redirect flood flows?**

**Less-than-significant Impact.** Implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other structures that would be placed within the 100-year floodplain. The replacement bridge would be constructed within the 100 year floodplain and has been designed to meet design criteria pertaining to a 100-year flood event. The pre-project water elevations for the existing bridge were modeled at 66.9 and 69.2 feet for the 50-year and 100-year flood events respectively. However, the resulting water surface elevations for the proposed replacement bridge were modeled at 67.2 and 69.1 feet for the 50-year and 100-year flood events respectively, yielding an improvement of 0.30 feet and -0.02 feet for the 50-year and 100-year flood events respectively. Upstream and downstream from the project site, the difference between the pre-project profile and replacement bridge profile would be 0.30 feet or less. This difference is negligible and does not constitute a significant encroachment. Similarly, the proposed project would not raise the base flood level or increase the risk of flooding adjacent properties and would not result in a significant risk to the floodplain or to adjacent property. Therefore, impacts related to flooding would be less than significant.

- e) **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

**Less-than-significant Impact.** As described in Section 3.8d above, the proposed project does not include the construction of any new housing or other structures that would be placed within the 100-year floodplain. Similarly, the proposed project would not raise the base flood level or increase the risk of flooding adjacent properties and would not result in a significant risk to the floodplain or to adjacent property. The proposed project is located within the path of water stored within the Sweetwater Reservoir and could be impacted by the failure of the Sweetwater Reservoir. However, implementation of the proposed project would not introduce any new risks

associated with a failure of the Sweetwater Reservoir beyond those that exist for the existing Willow Street Bridge. Therefore, impacts related to flooding would be less than significant.

**f) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

**Less-than-significant Impact.** As described in Section 3.8c above, the potential for erosion from the replacement bridge would be negligible due to the relatively small increase in pavement from the proposed project and narrow grading footprint. Therefore, impacts related to existing or planned stormwater drainage systems or additional sources of polluted runoff would be less than significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.9</b>	<b>LAND USE AND PLANNING.</b> Would the project:				
	a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

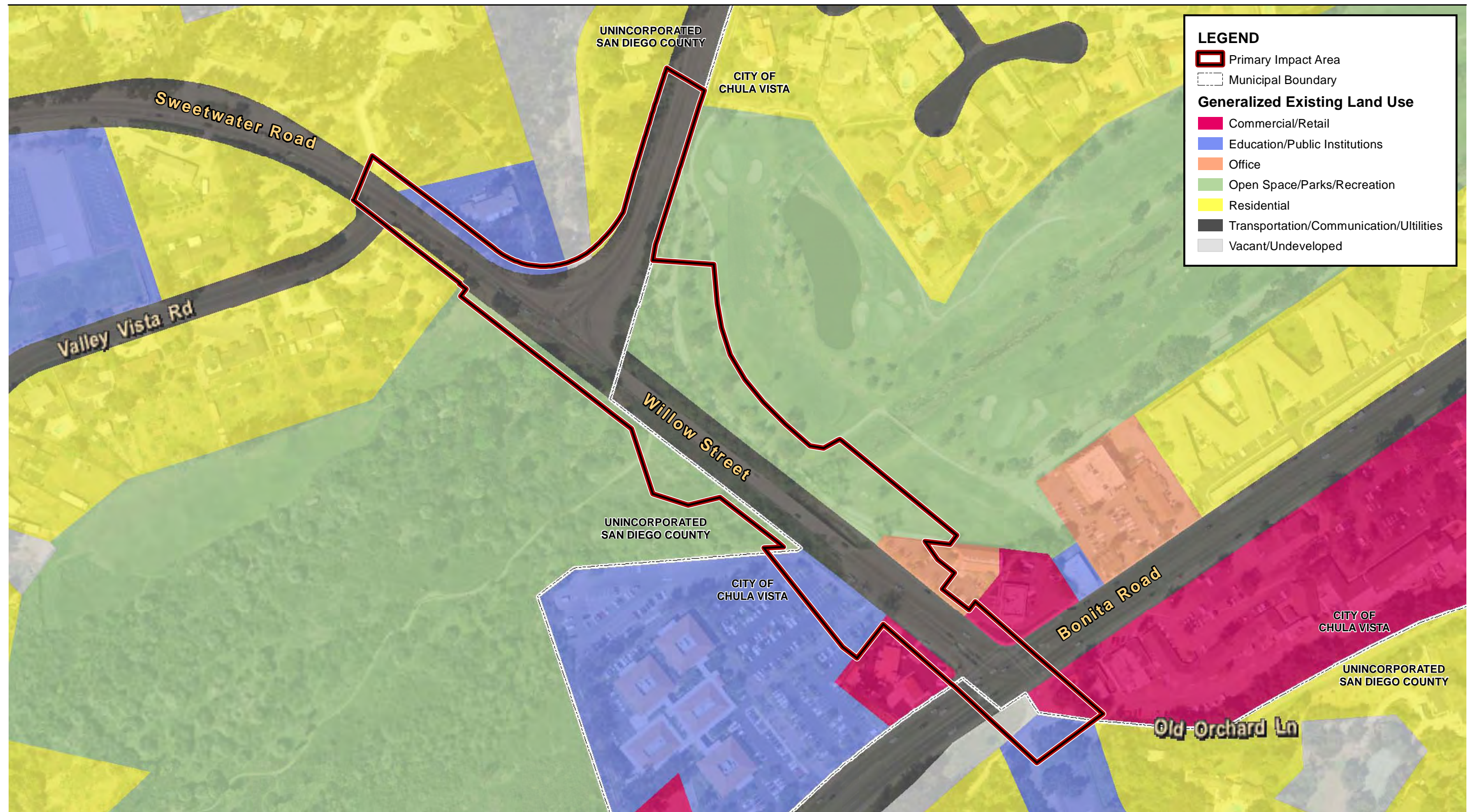
## ENVIRONMENTAL SETTING

### Existing Land Uses

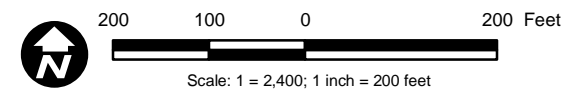
The proposed project is located within the City of Chula Vista and unincorporated San Diego County on Willow Street between Bonita Road and Sweetwater Road. The project area is defined by the Willow Street roadway segment between Sweetwater Road and Bonita Road in Chula Vista. The existing bridge crosses over the Sweetwater River and covers a distance of approximately ¼ mile. Land uses surrounding the proposed project are designated as open space/park/recreation, residential, commercial/retail, office, and education/public institutions (Figure 3.9-1).

Land immediately surrounding the proposed project consists of recreational uses and open space. The Chula Vista Municipal Golf Course is located east of the proposed project, while





Source: SANDAG 2009; Simon Wong Engineering 2008; SanGIS 2010



**Figure 3.9-1**  
**Existing Land Use**

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undeveloped land associated with the Sweetwater Regional Park is to the west. Additionally, a portion of the multipurpose path associated with the Chula Vista Municipal Golf Course runs parallel to the existing Willow Street Bridge. Similarly, an equestrian trail associated with the Sweetwater Regional Park crosses under the existing Willow Street Bridge and continues on the east side of the bridge along the Chula Vista Municipal Golf Course multipurpose path. An at-grade crossing for the equestrian trail exists at the Willow Street and Sweetwater Road as well.

Land north and south of the proposed project consists of a mix of residential, commercial, institutional, and public facilities development. Development closest to the proposed project, at the intersection of Willow Street and Bonita Road, includes the Kaiser Permanente Medical Center, Carlos Espana and Associates Dentistry, a 76 gas station, and a Jack in the Box restaurant. Single-family residential units within the project area are primarily located north of Willow Street Bridge along Sweetwater Road and Valley Vista Road.

## **Regulatory Framework**

### Chula Vista–Vision 2020

The proposed project is primarily located within Chula Vista and falls under the jurisdiction of the City’s general plan, Chula Vista–Vision 2020, which provides the framework for future growth within the city. Chula Vista–Vision 2020 “establishes strategies to achieve community goals pertaining to what will be developed and where; how people and traffic will get around; what various communities will look like; what areas will be preserved; and how public safety and other civic services will be provided” (Chula Vista 2005). The overall goals of the Land Use and Transportation Element of Chula Vista–Vision 2020 are to provide:

- Safe; healthy; walkable; and vibrant communities with a balance of jobs and housing.
- A mix of land uses that meets community needs and generates sufficient revenue for public facilities, services, and amenities.
- A sustainable circulation/mobility system that provides transportation choices and is well-integrated with the City’s land uses.

### San Diego County General Plan

The proposed project is also under the jurisdiction of the San Diego County Draft General Plan (County of San Diego 2010a). The San Diego County General Plan, last updated in 1979, is in the process of being updated again as General Plan 2020 (GP 2020). Although GP 2020 has not been finalized or adopted, the proposed project was analyzed for consistency with the goals and policies of GP 2020, since the existing approved General Plan is out of date. The stated overall goal in the regional Land Use Element for GP 2020 is to “accommodate population growth and influence its distribution in order to protect and use scarce resources wisely.” The Circulation Element of the GP 2020 states that its prime objective is to “provide a guide for the provisions of

a coordinated system of highway routes serving all sections of San Diego County.” The Circulation Element identifies the road classifications of various transportation corridors in the County, the existing major road system, and the planned road system intended to meet the needs of the Land Use Element and growth projections. The proposed project is also under the jurisdiction of the Sweetwater Community Plan (County of San Diego 1977), which is a component of the San Diego County General Plan that provides policies and goals specifically tailored to the community of Sweetwater.

#### Chula Vista Multiple Species Conservation Program Subarea Plan

The portion of the project area under the jurisdiction of the City is covered by Chula Vista MSCP Subarea Plan. The proposed project is located in an area designated as “Development Area outside of a Covered Project” in the City’s Subarea Plan. As such, compliance with the City’s HLIT ordinance is necessary. The HLIT ordinance implements the City’s MSCP Subarea Plan by protecting sensitive habitats and requiring certain mitigation for impacts to those habitats. Additionally, the proposed project is subject to the City’s Wetland Protection Program outlined in Section 5.2.4 of the City’s MSCP Subarea Plan. If a project requires wetlands mitigation equal to or greater than that outlined in the City’s Wetland Mitigation Ratio table, the City defers to the state and federal wetland regulatory requirements.

#### South County Multiple Species Conservation Program Subarea Plan

The portion of the project area under the jurisdiction of the County of San Diego is covered by the South County MSCP Subarea Plan. The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species and the preservation of natural vegetation communities in San Diego County. The MSCP addresses the potential impacts of urban growth, natural habitat loss, and species endangerment and creates a plan to mitigate for the potential loss of covered species and their habitat due to the direct impacts of future development of both public and private lands within the MSCP area (County of San Diego 1997). Mitigation for impacts within County land would need to meet the requirements of the South County MSCP Subarea Plan and the County of San Diego’s BMO. The County of San Diego land adjacent to the western boundary of the proposed project is classified as a “Take Authorized Area,” which does not require additional biological mitigation for development to occur.

## **DISCUSSION**

### **a) Physically divide an established community?**

**Less-than-significant Impact.** Implementation of the proposed project would replace the existing Willow Street Bridge. The proposed project would be constructed entirely within the existing ROW and would not result in any permanent ROW acquisitions that would affect any surrounding land uses. However, construction of the replacement bridge would require a temporary construction easement of approximately 1.8 acres that would extend into the

westernmost portion of the Chula Vista Municipal Golf Course. This temporary construction easement is needed to allow for construction access, staging, and storage of construction materials during construction of the bridge within the existing ROW. The temporary construction easement would not affect any of the holes on the golf course. However, the easement would require that the existing multipurpose path adjacent and parallel to the east side of the Willow Street Bridge be temporarily realigned 20 to 30 feet east of its original location and inside the City Municipal Golf Course. This realigned path would have a 10-foot-high chain-link fence with netting adjacent to the golf course side of the path to prevent errant golf balls from striking people using the realigned multipurpose path.

The temporary realigned multipurpose path would accommodate all existing uses for the existing multipurpose path, adhere to current standards, account for the bridge crossing over the low-flow channel, and create an unbroken path of travel. The realigned path would also serve as the temporary detour route for pedestrians, equestrians, and bicyclists. Once construction of the proposed project is completed, the original multipurpose path would be restored to its original location and the contractor would vacate the Chula Vista Municipal Golf Course, removing all construction equipment and other materials before striping and other final activities are completed for the bridge to begin operation. Therefore, impacts to the Chula Vista Municipal Golf Course would be temporary and the golf course would be restored to its original condition once construction was completed.

Similarly, construction of the replacement bridge would require a temporary construction easement of approximately 0.63 acre that would extend into the easternmost portion of the Sweetwater Regional Park. This temporary construction easement is necessary to access the water lines that need to be relocated and to allow for construction access due to the narrow space within the existing ROW available for constructing the western portion of the replacement bridge. Additionally, construction of the proposed project would temporarily affect the at-grade equestrian crossing near Sweetwater Road and an equestrian undercrossing beneath the northern end of the existing Willow Street Bridge. Access to these two crossings would remain open during construction at all times. The traffic control plan for the proposed project would include provisions that would require construction activities to be stopped so horse riders and pedestrians could be flagged across the road safely by construction personnel when necessary.

However, the proposed project would restore the existing equestrian trail crossings by incorporating a new at-grade crossing and a new undercrossing, with the new undercrossing meeting minimum vertical clearance requirements. Additionally, the contractor would vacate the Sweetwater Regional Park once construction was completed, removing all construction equipment and other materials before striping and other final activities are completed for the bridge to begin operation. Therefore, impacts to the Sweetwater Regional Park would be temporary, would provide for the continuation of current uses, and the park would be restored to its original condition once construction was completed.

The proposed project would temporarily affect access at several locations along Willow Street south of the existing bridge during construction. The 76 gas station and Jack in the Box restaurant would each lose half of their driveway access during construction for approximately

one week, and the Carlos Espana and Associates Dentistry office would lose half of their driveway access during construction for approximately one month. However, each property would have half of the existing driveway open during this time, and a TMP would be prepared and implemented during construction to alleviate impacts to the extent practicable during this partial access closure. Furthermore, access to Willow Street would be restored after approximately one week for the 76 gas station and Jack in the Box restaurant, and after approximately one month for the Carlos Espana and Associates Dentistry office, ensuring that impacts to circulation would be temporary.

The Kaiser Permanente Medical Center would lose access along Willow Street during construction for approximately one month. Additionally, the Kaiser Permanente Medical Center would temporarily lose seven parking spaces near this access point. The Kaiser Permanente Medical Center currently has approximately 375 parking spaces. Consequently, the temporary loss of seven parking spaces would result in a reduction of approximately two percent of existing parking. Once construction is complete, the project proposes to reinstate the seven parking spaces. Therefore, temporary loss of parking at the Kaiser Permanente Medical Center would not be significant. A TMP would be prepared and implemented during construction to alleviate impacts to the extent practicable during this partial access closure, and access to the Kaiser Permanente Medical Center would remain open throughout the construction process along Bonita Road. Furthermore, access to Willow Street would be restored after approximately one month, ensuring that impacts to parking and circulation would be temporary. Therefore parking and access impacts would be less than significant.

The existing Willow Street Bridge connects Bonita Road and Sweetwater Road, which are the principal arteries that provide for through-traffic. No housing units are located along the existing Willow Street Bridge. Residential neighborhoods near the proposed project are located on roads that branch off of Bonita Road and Sweetwater Road and are not directly affected by through-traffic on the Willow Street Bridge. Roads in these residential neighborhoods are intended to only provide access for residents and many of the roads are cul-de-sacs. Roads in these residential neighborhoods do not provide access to other communities or development areas and would not be used by through-traffic. Reducing congestion on Willow Street would improve circulation on a north-south connector street and allow for a smoother flow of through-traffic between the principal arteries of Sweetwater Road and Bonita Road, thereby improving commute times for residents in the neighborhoods located on roads that branch off Bonita Road and Sweetwater Road. Furthermore, the proposed project would not generate new traffic as the proposed project was developed to reduce existing and future traffic congestion that has already occurred, is planned, or is projected to occur. Therefore, implementation of the proposed project would not divide an established community and would improve circulation for residents in the neighborhoods located on roads that branch off of Bonita Road and Sweetwater Road.

- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**No Impact.**Chula Vista–Vision 2020

Chula Vista–Vision 2020 identifies Willow Street as a four-lane major road. The design of the proposed project would be consistent with this roadway designation. Additionally, by reducing traffic congestion on Willow Street and providing Class II Bikeways, the proposed project would be consistent with the overall goals of the Land Use and Transportation Element of a “[s]afe, healthy, walkable, and vibrant communities with a balance of jobs and housing” and “[a] sustainable circulation/mobility system that provides transportation choices and is well-integrated with the City’s land uses.”

San Diego County General Plan

Willow Street is identified in the Circulation Element of the San Diego County 2020 General Plan Update as a “4.1B Major Road with Intermittent Turn Lanes” (Chula Vista 2010). The design of the proposed project would be consistent with this roadway designation. Additionally, by reducing traffic congestion on Willow Street, the proposed project would be consistent with the Mobility Element’s goal of a providing a safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities. The proposed project would also be consistent with the goals of the Sweetwater Community Plan. Reducing congestion on Willow Street and confining the flow of through-traffic between the principal arteries of Sweetwater Road and Bonita Road would be consistent with the community character goal of maintaining the Sweetwater Community Planning Area as a “semi-rural community with unique topographic, ecologic, historic, recreational, and cultural characteristics.” The Circulation Element of the Sweetwater Community Plan states that rapid new development in adjacent communities and in the planning area is congesting existing roads within the planning area and that the lack of adequate north-south connector streets to move trips across the river valley exacerbates the congestion problem. Reducing congestion on Willow Street would improve circulation on a north-south connector street and allow for a smoother flow of through-traffic between the principal arteries of Sweetwater Road and Bonita Road.

**c) Conflict with any applicable habitat conservation plan or natural community conservation plan?****Less-than-significant Impact with Mitigation Incorporated.**Chula Vista Multiple Species Conservation Program Subarea Plan

The proposed Willow Street Bridge replacement project is located within a Development Area as mapped in the City’s MSCP Subarea Plan. Due to the constraints of the ROW, unavoidable impacts to natural upland and wetland habitats not containing narrow endemics are necessary. Avoidance measures (including placement of staging areas within existing developed areas), mitigation measures (such as preparation of a mitigation and monitoring plan for the revegetation efforts), and mitigation ratios are consistent with the MSCP implementation guidelines and with

the City's and County's MSCP Subarea Plans. The one exception is that for the temporary impacts to 0.055 acre of Tier II habitat, a 1:1 mitigation ratio has been proposed, rather than a 1.5:1 ratio. This 0.055 acres of Tier II habitat is located within the County of San Diego. Impacts to the wetlands have been limited to the permanent impacts associated with widening the bridge and the necessary temporary impacts for construction activities to widen the bridge. Staging areas have been confined to existing developed areas, including the adjacent golf course. Wetlands that are being avoided would be fenced during construction and labeled as ESAs. Additionally, the mitigation ratios for impacts to wetlands are consistent with the ratios in Section 5.2.4 of the City's MSCP Subarea Plan. Implementation of the mitigation measures identified in Section 3.4 would reduce impacts to biological resources to a level less than significant. Therefore, the proposed project would be consistent with the Chula Vista MSCP Subarea Plan.

### South County Multiple Species Conservation Program Subarea Plan

Mitigation measures described in Sections 3.4a through 3.4c would meet the mitigation requirements of the South County MSCP Subarea Plan and the County of San Diego BMO. Since the County of San Diego land impacted by the proposed project is classified as a "Take Authorized Area," no additional biological mitigation is required related to the MSCP. However, additional mitigation would be required for 0.287 acre of impacts to the SWOMA due to its status as a mitigation site. Implementation of the appropriate mitigation measures as required by the resource agencies would ensure that the proposed project would be consistent with the South County Segment MSCP Subarea Plan.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less- than- significan t Impact	No Impact
<b>3.10</b>	<b>MINERAL RESOURCES.</b> Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ENVIRONMENTAL SETTING

The proposed project site is within an existing roadway ROW that is not designated as a mineral resource recovery site. Mineral extraction currently does not occur on the project site. There are no known mineral resources that have been documented at the project site. However, since the project area is located on a portion of the Sweetwater River, sand and gravel exist on-site, which could be characterized as a potential mineral resource.



## DISCUSSION

**a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

**No Impact.** As described above, sand and gravel within the Sweetwater River could be characterized as a potential mineral resource. However, given the small size of the project area, its location within an urban area between the Chula Vista Municipal Golf Course and Sweetwater Regional Park, and the presence of the existing Willow Street Bridge, it would not be financially feasible to operate a mineral resource extraction facility at the project site. Therefore, the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

**b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

**No Impact.** The proposed project is located within an existing roadway ROW that is not designated as a mineral resource recovery site. Land uses surrounding the proposed project are designated as open space/parks/recreation, residential, commercial/retail, office, and education/public institutions (Figure 3.9-1). Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.11 NOISE.</b>	Would the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## ENVIRONMENTAL SETTING

The project area consists of the existing Willow Street Bridge and the immediate surrounding area extending from the Willow Street/Bonita Road intersection north to Sweetwater Road and extending 600 feet north and west along Sweetwater Road. The area around the Willow Street/Bonita Road intersection is developed as commercial and as a multiple-family development east of Willow Street on Bonita Road. Along Willow Street, the land is recreational in use with trails extending under the bridge to open space to the west and the Chula Vista Municipal Golf Course located directly east. Residential land uses are located in the area north of the project area, both northeast along Doral Way and northwest along Valley Vista Road.

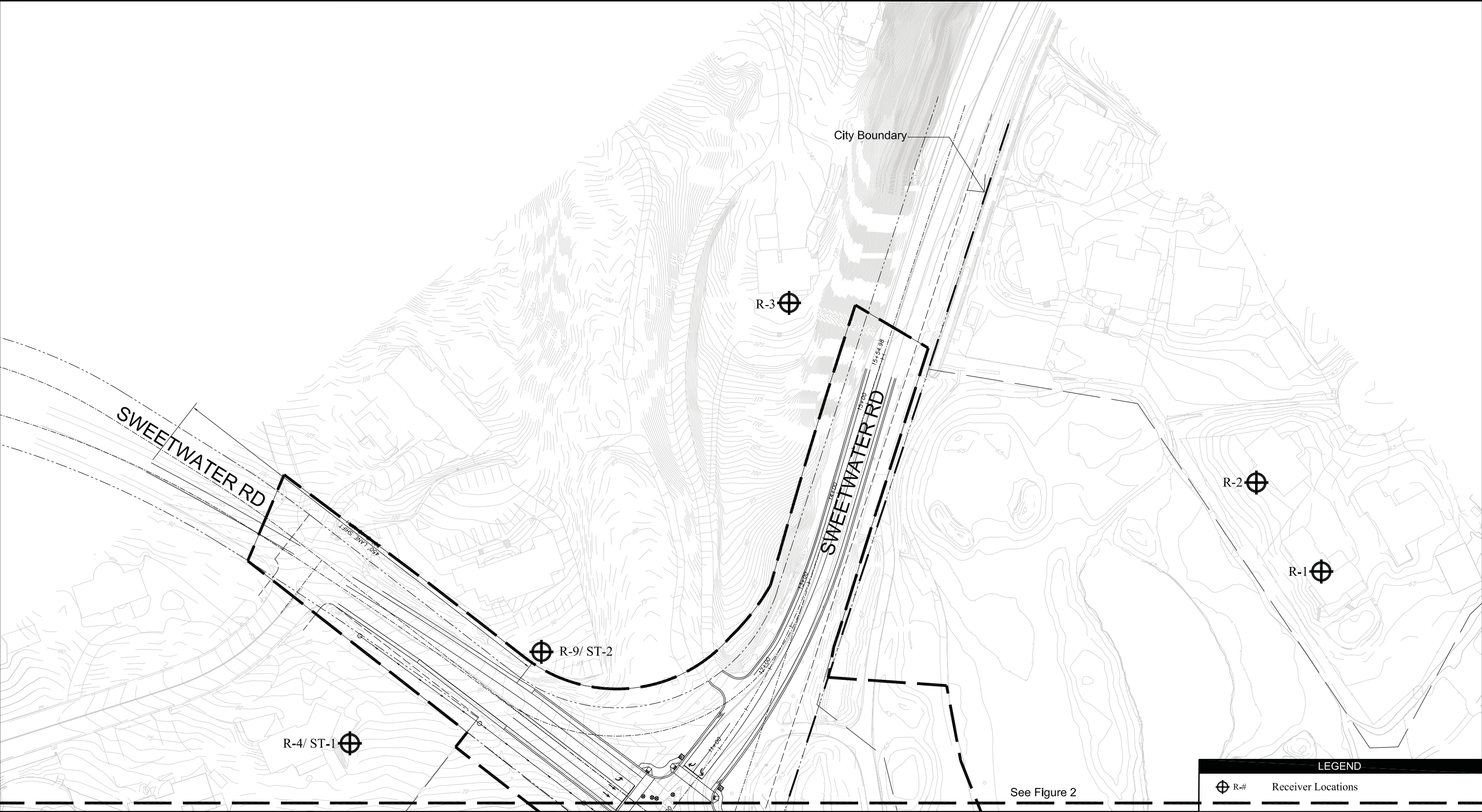
### Noise Receivers

The noise receivers analyzed in this study are located in the residential and commercial areas along Willow Street, Sweetwater Road, and Bonita Road. The noise receivers analyzed are listed in Table 3.11-1 and shown in Figures 3.11-1a through 3.11-1c. Most category B land uses in the project area are residential, including both single-family and multiple-family. This analysis includes 12 receivers that represent seven single-family residential units, three commercial units, and two recreational units.

Willow Street is perpendicular to the Sweetwater River channel. Most surrounding land uses are located at higher elevations than the existing Willow Street Bridge. The exceptions to this are receivers 1 and 2 located east of Willow Street on Doral Way and recreational uses in the river valley. These properties are generally located at or just below the grade of the existing and future Willow Street Bridge.

Nonresidential category B receivers include the equestrian trail and the Chula Vista Municipal Golf Course (see Figure 3.11-1b). The golf course is located east of the bridge in the riverbed.

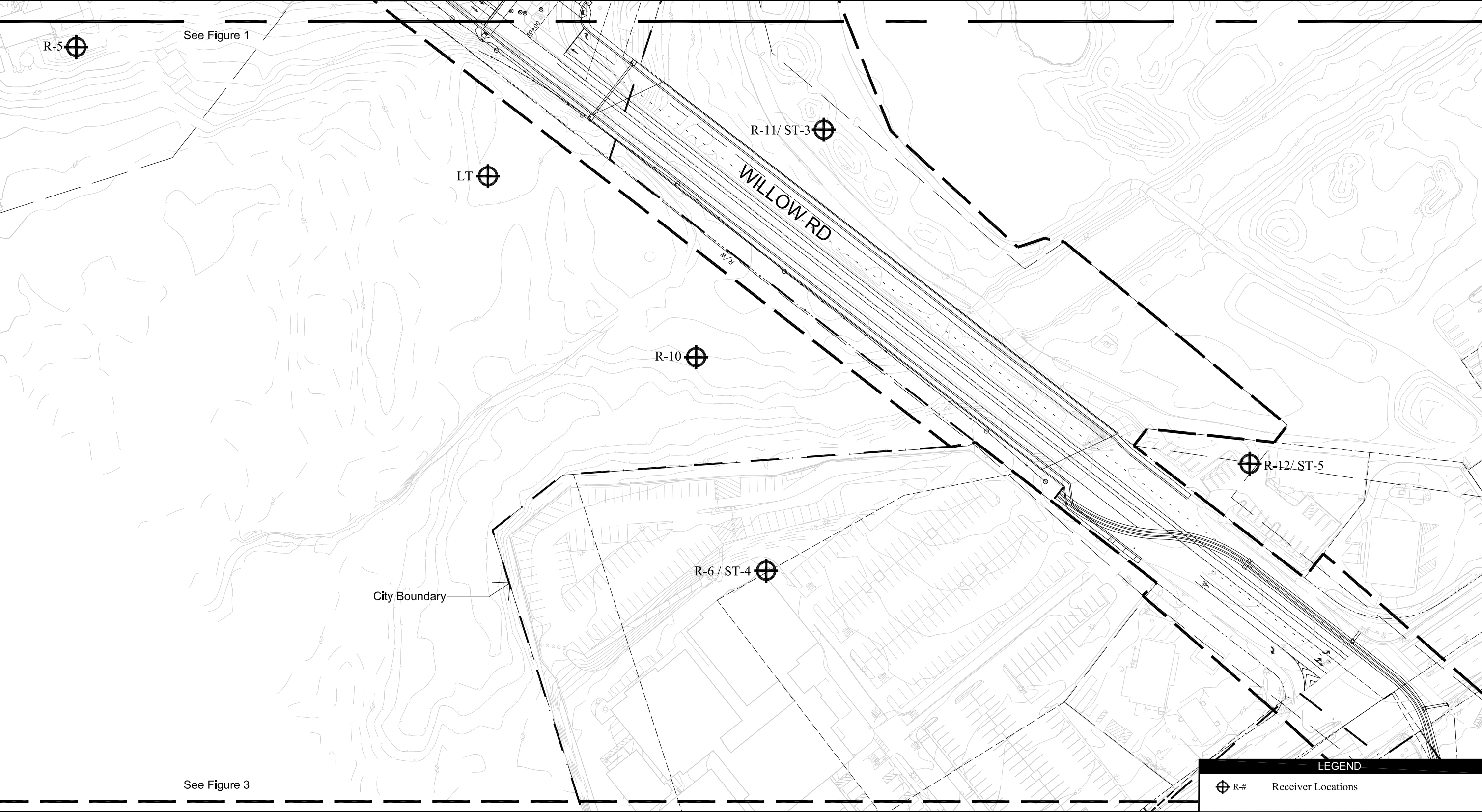
Category C receivers include the Kaiser Permanente Medical Center, Sweetwater Women's Center, and Carlos Espana and Associates Dentistry. The Medical Center is located west of the intersection of Willow Street and Bonita Road, the Sweetwater Women's Center is located on Sweetwater Road just north of the Sweetwater Road/Willow Street intersection, and the Carlos Espana and Associates Dentistry is located on Willow Street just south of the bridge (see Figure 3.11-1b).



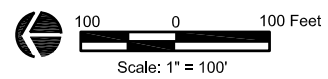
**Figure 3.11-1a**  
**Noise Measurement and Receiver Locations (1 of 3)**

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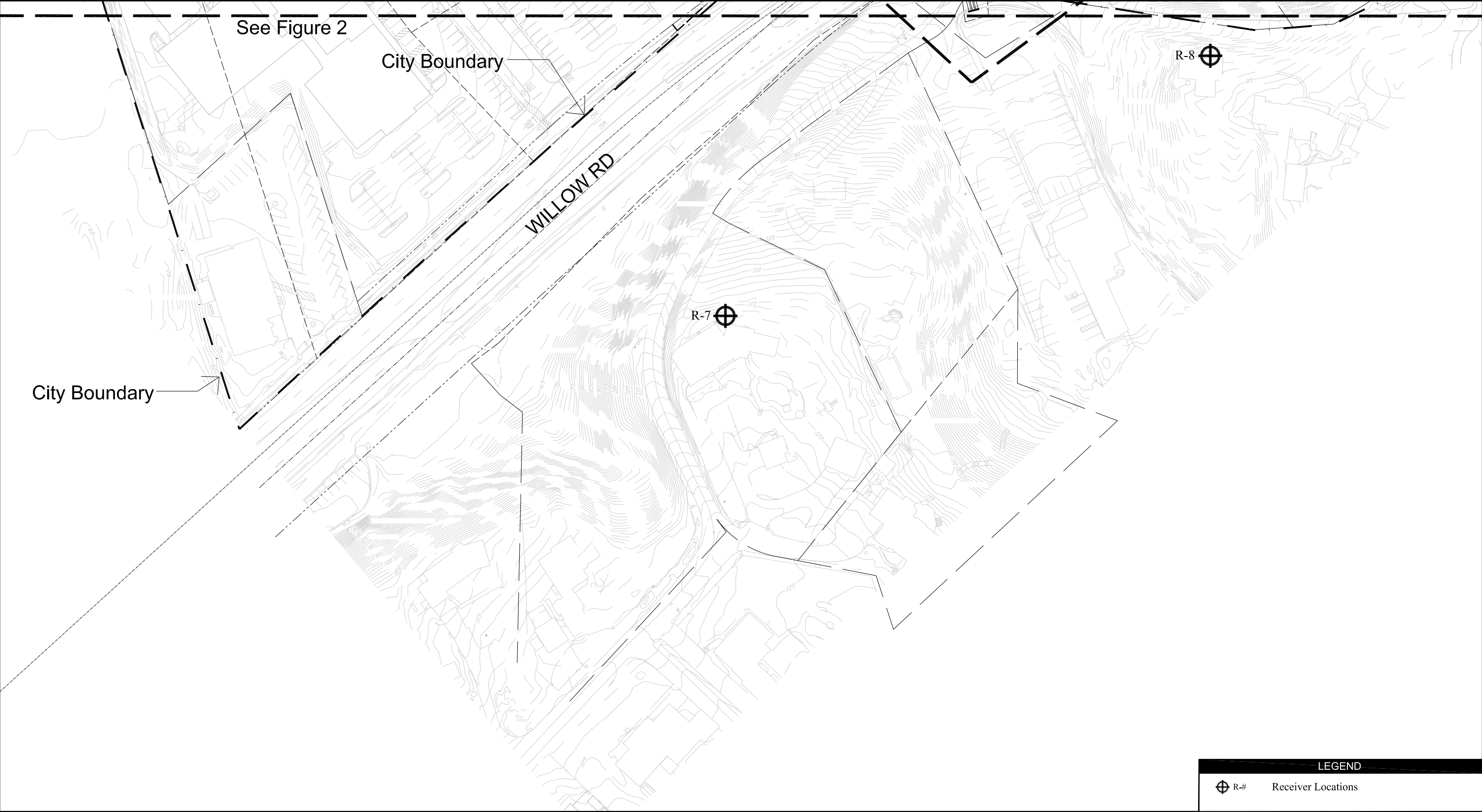
Source: County of San Diego



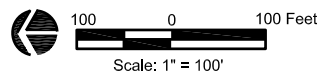
**Figure 3.11-1b**  
**Noise Measurement and Receiver Locations (2 of 3)**

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Source: County of San Diego



**Figure 3.11-1c**  
**Noise Measurement and Receiver Locations (3 of 3)**

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**Table 3.11-1  
Noise Receivers**

<b>Receiver ID</b>	<b>Location or Address</b>	<b>Type of Development</b>
R-1	4010 Bermuda Dunes Place	Single-family Residential
R-2	4015 Bermuda Dunes Place	Single-family Residential
R-3	3600 Willow Road	Single-family Residential
R-4	3850 Valley Vista Road	Single-family Residential
R-5	3840 Valley Vista Road	Single-family Residential
R-6	3955 Bonita Road, Kaiser Permanente Medical Center	Commercial
R-7	2724 The Hill Road	Single-family Residential
R-8	4008 Old Orchard Lane	Single-family Residential
R-9	3855 Sweetwater Road., Sweetwater Woman's Club	Commercial
R-10	Equestrian Trail – West of Bridge	Recreation
R-11	4355 Bonita Road, Chula Vista Municipal Golf Course	Recreation
R-12	145 Willow Street, Carlos Espana and Associates Dentistry	Commercial

### Existing Noise Level Measurements

Site visits and noise measurements were conducted on March 16 and 17, 2010. For each measurement location, the sound level meter (SLM) was placed 5 feet above the existing ground elevation. A summary of the LT (24-hour) measurements is provided in Table 3.11-2 below and locations are shown in Figure 3.11-1a.

**Table 3.11-2  
Summary of LT-1**

<b>Date</b>	<b>Time</b>	<b>L<sub>eq</sub> (dBA)</b>	<b>Date</b>	<b>Time</b>	<b>L<sub>eq</sub> (dBA)</b>
3/17/2010	06:00	<b>64</b>	3/16/2010	18:00	61
3/17/2010	07:00	<b>62</b>	3/16/2010	19:00	60
3/17/2010	08:00	<b>61</b>	3/16/2010	20:00	59
3/17/2010	09:00	60	3/16/2010	21:00	57
3/17/2010	10:00	60	3/16/2010	22:00	56
3/17/2010	11:00	60	3/16/2010	23:00	52
3/17/2010	12:00	60	3/17/2010	00:00	51
3/17/2010	13:00	61	3/17/2010	01:00	47
3/17/2010	14:00	61	3/17/2010	02:00	50
3/17/2010	15:00	61	3/17/2010	03:00	53
3/17/2010	16:00	61	3/17/2010	04:00	58
3/17/2010	17:00	<b>62</b>	3/17/2010	05:00	<b>62</b>

**Bolded** numbers indicate the loudest hour.

Measurement data for LT-1, Table 3.11-2, indicate that the loudest periods of the day in the southern end of the project area occur during the 6:00 a.m. hour.

ST (20-minute) noise levels were measured between the hours of 2:00 p.m. and 7:00 p.m. at selected receivers and other points of interest within the project area (Figures 3.11-1a and 3.11-1b). Sketches of the SLM setups and locations are shown in Appendix B. Weather conditions were clear and warm, 70°F to 85°F, with a slight breeze, less than 2 to 3 mph with gusts reaching 5 mph each day.

Since area roadways are a continuous noise source, background noise (i.e., noise without the traffic noise from local roadways) is not easily measured. However, the background noise level may be estimated at less than 52 A-weighted decibels (dBA)  $L_{eq}$ , based on the average  $L_{90}$  measurement (which represents the noise level exceeded 90 percent of the time during the measurement) at the 24-hour measurement LT-1.

Based on the 24-hour measurement, the noisiest hour (i.e., the greatest volumes at full speed) occurs during the early morning period. ST measurements were taken outside the loudest hour and were adjusted upward for calibration purposes. The ST noise measurements are summarized in Table 3.11-3.

**Table 3.11-3**  
**Short-Term Noise Measurement Summary**

Site ID <sup>1</sup>	Location or Address	Type of Development	Time	Measured Noise Level, $L_{eq}(h)$ , dBA	Adjusted Worst-Hour Noise Level, $L_{eq}(h)$ , dBA
ST-1	Residence on Valley Vista Road	Residence	14:15–14:28	60	63
ST-2	Sweetwater Women's Center	Commercial	14:49–15:19	60	64
ST-3	Chula Vista Municipal Golf Course	Recreational	16:00–16:30	60	63
ST-4	Kaiser Permanente Medical Center	Commercial	16:59–17:29	55	57
ST-5	Carlos Espana and Associates Dentistry	Commercial	18:54–19:34	62	64

<sup>1</sup> See Figures 3.11-1a and 3.11-1b.

The dominant noise source in the project area is traffic noise from area roadways, including Willow Street. Traffic on major local roadways, such as Sweetwater Road and Bonita Road, was substantial and represented secondary noise sources with a noticeable but insignificant effect on the ambient noise levels. Smaller local roadways, including Valley Vista Road and Doral Way, had limited traffic, which had a minor effect on ambient noise levels in the project area.

### Modeling Existing Noise Levels and Calibration

All noise measurement locations along the existing Willow Street roadway were modeled, and differences between measured loudest hour noise levels and the predicted loudest hour noise levels ranged from 0 to 7 dBA. Therefore, for receivers near where the 4- and 7-dBA difference occurred, a dBA adjustment factor was applied (receivers 10, 11 [-4], and 9 [-7]). No adjustment factor was applied to those with a 3-dBA or less difference (all others). Existing measured and modeled noise levels at specific receivers are compared and the resultant difference is shown in Table 3.11-4.

**Table 3.11-4**  
**Loudest Hour Noise Level Model Verification**

Measurement Location / Associated Receiver	Measured Noise Level $L_{eq}$ (dBA)	Loudest Hour Noise Level Adjustment	Adjusted Loudest Hour Noise Level $L_{eq}$ (dBA)	Modeled Loudest Hour Noise Level $L_{eq}$ (dBA)	Difference (K-Factor)
ST-1/R-4	60	3	63	64	-1
ST-2R-9	60	4	64	71	-7
ST-3/R-11	60	3	63	67	-4
ST-4/R-6	55	2	57	58	-1
ST-5/R-12	62	2	64	64	0

### **Regulatory Framework**

#### City of Chula Vista

The City has established land use compatibility guidelines in the Environmental Element of the City's adopted General Plan (Chula Vista 2005). These guidelines identify compatible exterior noise levels for various land use types. Exterior noise levels shall not exceed a Community Noise Equivalent Level (CNEL) of 65 dB for residential and open space uses. Exterior usable areas do not include residential front yards or balconies, unless the areas such as balconies are part of a required usable open space calculation for multi-family units. Exterior noise levels for office, recreational, and retail uses should not exceed 70 dB CNEL. Also, it should be noted that California Building Code (Part 2, Title 24, CCR) interior noise criteria are not applicable to existing developments.

If the ambient noise level is currently at or exceeds the significance thresholds for traffic noise described above, and if noise levels would result in a less than 3-dB increase, then the impact is not considered significant.

Construction noise is governed by City Municipal Code Chapter 19.68 'Performance Standards and Noise Control' (Chula Vista 1985). This ordinance exempts construction and demolition activities from City noise regulations.

### County of San Diego

While the County of San Diego is not the lead agency, several land uses are located within the jurisdiction of the County and the noise policies of the County are used at these locations to determine impacts.

Policy 4b of the Noise Element of the County General Plan (County 2006a) sets a standard for exterior noise levels at noise sensitive areas of 60 decibels, A-weighted (dBA), using the CNEL metric. According to Policy 4b, when a new development may result in any (existing or future) noise-sensitive land use being exposed to noise levels of 60 CNEL or greater, an acoustical analysis is required. A noise-sensitive area is defined as “any residence, hospital, school, hotel, resort, library or any other facility where quiet is an important attribute of the environment.”

For single-family detached dwellings, “exterior noise” is defined as “noise measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum area:

- Net lot area up to 4,000 sq. ft.: 400 square feet
- Net lot area 4,000 sq. ft. to 10 ac.: 10% of net lot area
- Net lot area over 10 ac.: 1 ac.”

For all other projects, exterior noise is defined as “noise measured at all exterior areas, which are provided for group or private usable open space purposes.”

The County regulates noise from construction through County Code Section 36.409 through 36.411, Noise Control (County of San Diego 2006b). Section 36.409 limits construction noise to an average sound level of 75 dBA for an 8-hour period (75 dBA  $L_{eq(8)}$ , between 7 a.m. and 7 p.m. Sections 36.410 and 36.411 limit maximum noise levels from construction of private projects and public road projects, respectively. Section 36.410 is not applicable to the proposed project. Section 36.411 sets the following limitations on public road projects:

- (a) Except for emergency work, no person working on a public road project shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 3.11-5, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period, as described in subsection (c) below. The maximum sound level depends on the use being made of the occupied property. The uses in Table 3.11-5 are as described in the County Zoning Ordinance (County of San Diego 2006b).



**Table 3.11-5**  
**San Diego County Code Section 36.410,**  
**Maximum Sound Level (Impulsive) Measured at Occupied**  
**Property in Decibels (dBA) for Public Road Projects**

<b>Occupied Property Use</b>	<b>Decibels (dBA)</b>
Residential, village zoning, or civic use	85
Agricultural, commercial, or industrial use	90

- (b) The minimum measurement period for any measurements conducted under this section shall be 1 hour. During the measurement period a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it would be deemed that the maximum sound level was exceeded during that minute.

## DISCUSSION

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**Less-than-significant Impact with Mitigation Incorporated.** Traffic noise levels were predicted for two future (2030) conditions: the No Build Alternative and the Build Alternative. Existing and future (2030) traffic volumes on all study area roadways were taken from the project traffic report (Kimley-Horn 2009). These future traffic noise levels were predicted using the FHWA's Transportation Noise Model, version 2.5 (TNM) (FHWA 2004). Specific model inputs and results are discussed in detail in the Noise Study Report (NSR). Noise levels calculated in the NSR for Caltrans standards are presented in loudest hour noise level ( $L_{eq}$ ). However, the Chula Vista and County of San Diego standards are based on the CNEL. Thus, noise levels were converted from the loudest hour to CNEL based on the 24-hour measurement taken for the NSR. Utilizing the CNEL noise level measured by LT-1 and comparing it to the LT-1 loudest hour  $L_{eq}$ , a conservative assumption for the difference between loudest hour  $L_{eq}$  and CNEL can be derived. LT-1 measured 65 dBA CNEL and a maximum hourly  $L_{eq}$  of 64 dBA  $L_{eq}$  during the survey period conducted on March 16 through March 17, 2010. Therefore, it can be reasonably assumed that noise levels modeled under the NSR as  $L_{eq}$  should have +1 dBA added to generate the CNEL noise levels.

## Construction Impacts

Construction noise would be generated by diesel engine-driven construction equipment used for site preparation and grading, removal of existing pavement, loading, unloading, and placing

materials and paving. Diesel engine-driven trucks also would bring materials to the site and remove the spoils from excavation.

Under load conditions, diesel engine noise levels may be 85 to 90 dBA at a distance of 50 feet from the equipment (FHWA 2006b). Occasional pile driving may be performed, which would generate noise levels of 95 dBA at 50 feet from the equipment (FHWA 2006b). Construction equipment noise is considered a “point source,” and is attenuated over distance at a rate of 6 dBA for each doubling of distance. Thus, a noise level of 85 dBA at 50 feet would be 79 dBA at 100 feet and 73 dBA at 200 feet from the source.

During excavating, grading, and paving operations, equipment moves to different locations and goes through varying load cycles, and there are breaks for the operators and for nonequipment tasks, such as measurement. Although maximum noise levels may be 85 to 90 dBA at a distance of 50 feet during most construction activities, hourly average noise levels near the edge of the project site at locations where the excavation, grading, and paving occur would be anticipated to be 65 to 75 dBA  $L_{eq}$ . Maximum noise levels during pavement breaking would be about 90 dBA  $L_{max}$ .

Under the No Build and Build Alternatives, the nearest receivers (residential units) are located approximately 300 feet or greater from the center of proposed construction and pavement-breaking activities. Hourly construction noise levels at this distance would attenuate to 65 dBA  $L_{eq}$  or less.

As stated above in the regulatory framework discussion, construction noise is exempt from City noise standards under Chula Vista Ordinance 19.68.060. Additionally, noise levels would not exceed the County’s construction 75 dBA  $L_{eq(8)}$  or 85 dBA  $L_{max(0.25)}$  standards for construction noise (Sections 36.409 and 36.411). Furthermore, implementation of mitigation measures NOI-1 through NOI-4 would further reduce construction-related noise levels and reduce impacts to a level less than significant.

NOI-1: As required by the Caltrans’ Standard Specification 7-1.011, each internal combustion engine will be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine will be operated on the project without said muffler.

NOI-2: Staging areas should be located at least 500 feet from occupied residential units. Work in staging areas that generate loud noises, such as equipment maintenance, shall not occur between the hours of 10:00 p.m. and 7:00 a.m., Monday through Friday, or between the hours of 10:00 p.m. and 8:00 a.m., Saturday and Sunday, per the City of Chula Vista Noise Ordinance (17.24.040).

NOI-3: If traffic control and construction signs that require power for lighting or flashing are located near residential units, the source of power shall be batteries, solar cells, or another quiet source. Gas- or diesel-fueled internal combustion engines should not be used.

NOI-4: Pile driving and explosives blasting will be restricted to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and will not be allowed on Saturdays, Sundays, or holidays, per the City of Chula Vista Noise Ordinance.

### **Operational Impacts**

The City has established outdoor activity area noise level thresholds for residential areas as 65 dBA CNEL, for recreational/open space areas as 65 dBA CNEL, and for retail areas as 75 dBA CNEL. The County sets an exterior noise level limit for noise-sensitive land uses, which are defined as “any residence, hospital, school, hotel, resort, library or any other facility where quiet is an important attribute of the environment.” Predicted noise levels for the No Build and Build future conditions are shown in Table 3.11-6.

As shown in Table 3.11-6, noise level increases at affected receivers would be less than 3 dBA. Thus the proposed project would not result in a substantial permanent increase in noise levels. Additionally, noise levels would not exceed City or County standards. Therefore, operation noise associated with the proposed project would result in less-than-significant impacts.

#### **b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**Less-than-significant Impact with Mitigation Incorporated.** Pile driving would be required during construction of new bridge footings under the Build Alternative. Because construction would occur during the daytime, no pile driving would occur during nighttime hours. Pile-driving activities would generate maximum noise levels of 95 dBA at 50 feet each time the hammer head strikes the pile. It is estimated that the actual strike of an impact pile driver accounts for 20 percent of an hour, which results in an average hourly noise level of 88 dBA  $L_{eq}$  at 50 feet from the pile. The nearest receiver (R-6) to the bridge would be approximately 300 feet from pile-driving activities. At this distance, noise levels would average 72 dBA  $L_{eq}$ , and maximum noise levels would be about 79 dBA  $L_{max}$ . These noise levels would be temporary and would cease at the end of construction on the bridge.

As stated above in the regulatory framework discussion, construction noise is exempt from City noise standards under Chula Vista Ordinance 19.68.060. Additionally, noise levels would not exceed the County’s construction 75 dBA  $L_{eq(8)}$  or 85 dBA  $L_{max(0.25)}$  standards for construction noise (Sections 36.409 and 36.411). Additionally, implementation of mitigation measures NOI-1 through NOI-4 would further reduce construction-related noise impacts to a level less than significant.

#### **c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less-than-significant Impact.** As described in Section 3.11a and shown in Table 3.11-6, noise level increases at affected receivers would be less than 3 dBA. Thus the proposed project would

not result in a substantial permanent increase in noise levels. Additionally, noise levels would not exceed City or County standards. Therefore, operation noise associated with the proposed project would result in less-than-significant impacts.

**d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less-than-significant Impact with Mitigation Incorporated.** Construction of the proposed project would have the potential to result in periodic increases in the ambient noise level. However, as described above in Section 3.11a, the hourly average noise levels near the edge of the project site at locations where the excavation, grading, and paving would occur would be anticipated to be 65 to 75 dBA  $L_{eq}$ . Furthermore, construction noise is exempt from City noise standards under Chula Vista Ordinance 19.68.060, and noise levels would not exceed the County's construction 75 dBA  $L_{eq}(8)$  or 85 dBA  $L_{max}(0.25)$  standards for construction noise (Sections 36.409 and 36.411). This periodic increase in the ambient noise level would cease once construction was complete and implementation of mitigation measures NOI-1 through NOI-4 would further reduce the periodic increases in the ambient noise level related to construction to a level less than significant.

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The proposed project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels associated with an airport.

**c) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The proposed project is not located within the vicinity of a private airstrip. Therefore, implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels associated with a private airstrip.

Table 3.11-6  
Predicted Traffic Noise Impacts – City of Chula Vista Criteria

Receiver ID	Location or Address	Type of Development	Number of Units Represented	Applicable Standard dBA CNEL	Predicted Existing Noise Level dBA CNEL	Future 2030					
						No Build Alternative			Build Alternative		
						Predicted Noise Level dBA CNEL	Change Less Existing dBA CNEL	Impact Type	Predicted Noise Level dBA CNEL	Change Less Existing, dBA CNEL	Impact Type
R-1	4010 Bermuda Dunes Place	Single-family Residential	1	65	55	55	0	None	55	0	None
R-2	4015 Bermuda Dunes Place	Single-family Residential	1	65	55	55	0	None	56	1	None
R-3	3600 Willow Road	Single-family Residential	1	65	56	56	0	None	57	1	None
R-4	3850 Valley Vista Road	Single-family Residential	1	65	65	65	0	None	65	0	None
R-5	3840 Valley Vista Road	Single-family Residential	1	65	55	55	0	None	56	1	None
R-6	3955 Bonita Road, Kaiser Permanente Medical Center	Commercial	1	70	59	59	0	None	60	1	None
R-7	2724 The Hill Road	Single-family Residential	1	65	61	61	0	None	62	1	None
R-8	4008 Old Orchard Lane	Single-family Residential	1	65	64	64	0	None	64	0	None
R-9	3855 Sweetwater Road., Sweetwater Woman’s Club	Commercial	1	70	65	65	0	None	65	0	None
R-10	Equestrian Trail – West of Bridge	Recreation	1	70	67	67	0	None	67	0	None
R-11	4355 Bonita Road, Chula Vista Municipal Golf Course	Recreation	1	70	64	64	0	None	63	-1	None
R-12	145 Willow Street, Carlos Espana and Associates Dentistry	Commercial	1	70	65	65	0	None	67	2	None

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ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
<b>3.12</b>	<b>POPULATION AND HOUSING.</b> Would the project:				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## ENVIRONMENTAL SETTING

As described in Section 3.9, land immediately surrounding the proposed project consists of recreational uses and open space. The Chula Vista Municipal Golf Course is located east of the proposed project, while undeveloped land associated with the Sweetwater Regional Park is located west of the proposed project. Land north and south of the proposed project consists of a mix of residential, commercial, institutional, and public facilities development. Development closest to the proposed project, at the intersection of Willow Street and Bonita Road, consists of commercial land uses, while single-family residential units within the project area are primarily north of Willow Street Bridge along Sweetwater Road and Valley Vista Road. Development of residential, commercial, and other urban uses are anticipated to increase in the future throughout the City of Chula Vista and San Diego County. Table 3.12-1 shows population growth forecasts between 2000 and 2030 for the City and San Diego County, as well as the surrounding jurisdictions on National City and City of San Diego. These projections show that the populations of these jurisdictions have grown between 2000 and 2010 and are projected to continue to grow through 2030 independent of the proposed project.

**Table 3.12-1  
Population Forecasts**

	2000	2010	2020	2030	Numeric Change	Percent Change
Chula Vista	173,600	247,900	269,000	278,200	104,600	60.3%
National City	54,300	56,100	59,000	62,800	8,600	15.8%
San Diego	1,223,400	1,370,300	1,507,800	1,656,800	433,400	35.4%
San Diego County	2,813,800	3,211,700	3,528,600	3,855,100	1,041,300	37.0%

## DISCUSSION

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?**

**No Impact.** Implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing. The proposed project would not extend any existing roadways or access into an undeveloped area or introduce any new roadways that could induce growth. The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur.

Future growth in the areas surrounding the proposed project would be constrained by existing development. Land surrounding the proposed project is already developed or preserved as undevelopable land as the Chula Vista Municipal Golf Course, Sweetwater County Park, Kaiser Permanente Medical Center, Carlos Espana and Associates Dentistry, a 76 gas station, and a Jack in the Box restaurant. Although some small developable lots may exist in the areas surrounding the proposed project, development of these lots would be governed by the existing land use maps and growth policies set forth in the Chula Vista – Vision 2020 and San Diego County GP 2020, which would prevent large-scale development that was not consistent with the land uses anticipated for this area in these general plans. Residential development is designated for low-density developments, which would prevent large-scale development from occurring. Land beyond the immediate vicinity of the proposed project is also developed with very limited amounts of developable land. Therefore, the proposed project would not increase population.

- b) **Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The proposed project would be constructed entirely within the existing ROW of the City of Chula Vista and County of San Diego. Therefore, the proposed project would not result in any permanent ROW acquisitions and would not displace any existing housing.

- c) **Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

**No Impact.** As described in Section 3.12b, the proposed project would be constructed entirely within the existing ROW and would not displace any residents from their homes.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
<b>3.13</b>	<b>PUBLIC SERVICES.</b> Would the project:				
	a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any public services:				
	Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## ENVIRONMENTAL SETTING

### Fire Protection

Two fire stations are located near the proposed project. The Bonita Sunnyside Fire District Regional Cooperative Care Program American Medical Response facility is located at 4035 Bonita Road and the Bonita Sunnyside Fire District Station 2 is located at 4900 Bonita Road.

### Police Protection

Police services are provided by the Bonita Public Safety Center, located at 4355 Bonita Rd., operated by the San Diego County Sheriff's Department. Officers in the Chula Vista Police Department also use the facility as needed.

### Schools

Two schools are near the proposed project. Valley Vista Elementary School is located at 3724 Valley Vista Way and Ella B. Allen Elementary School is located at 4300 Allen School Lane.

## **Parks and Recreation**

### Chula Vista Municipal Golf Course

The Chula Vista Municipal Golf Course is an 18-hole municipal golf course open to the public located at 4475 Bonita Road (American Golf 2010). The western boundary of the Chula Vista Municipal Golf Course is adjacent to the eastern boundary of the proposed project. Amenities at the golf course include a driving range, chipping green, putting green, clubhouse, pro shop, restaurant, and a snack bar. The Chula Vista Municipal Golf Course is located on land owned by the City, which leases the golf course to a private company.

### Sweetwater Regional Park

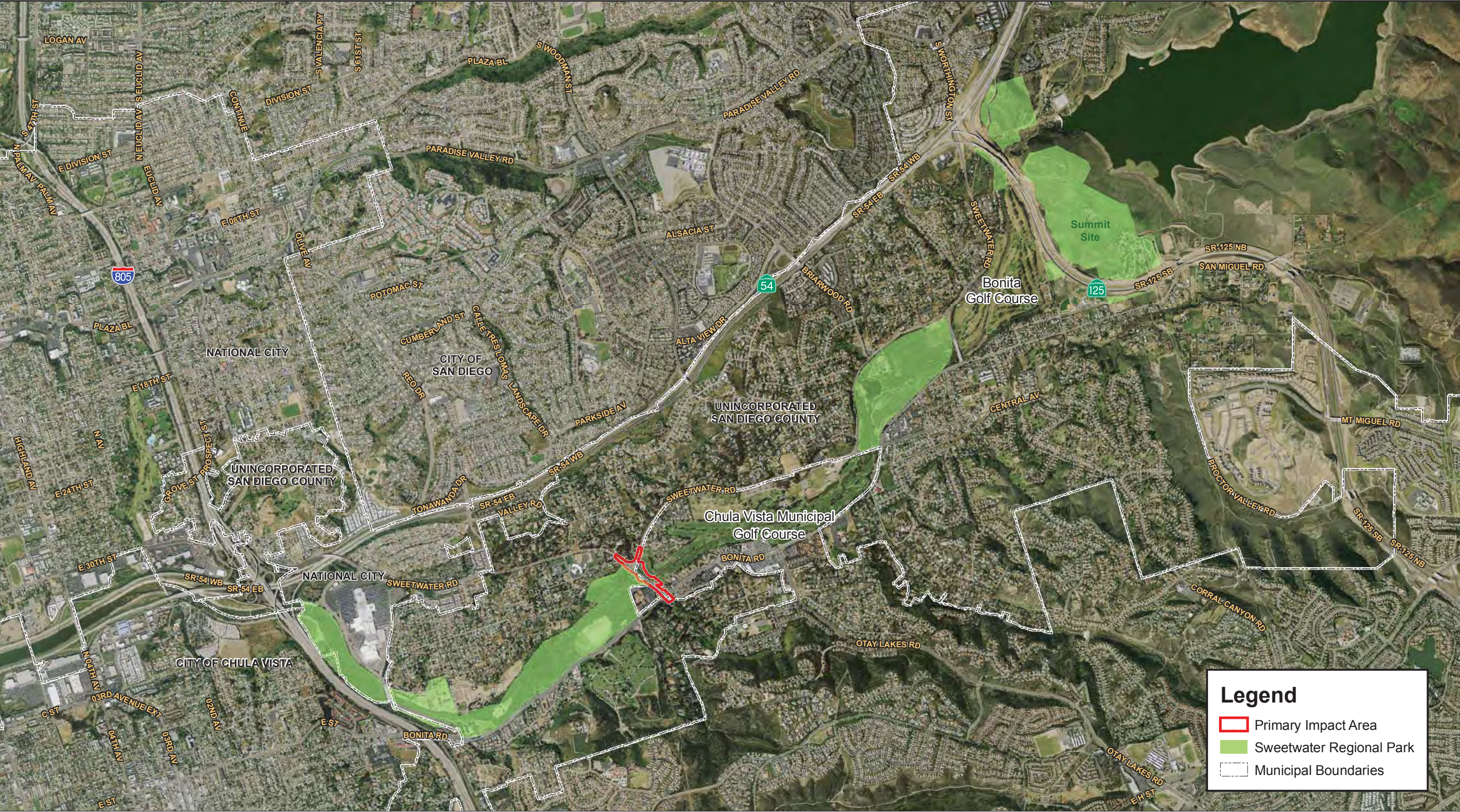
The Sweetwater Regional Park is an approximately 540-acre natural open space park along the Sweetwater River that is open to the public (County of San Diego 2010b). The park includes a system of trails for horseback riding, hiking, scenic enjoyment, and wildlife observation. The Sweetwater Regional Park is separated into three areas (Figure 3.13-1). The Summit Site portion of the park, located approximately 2.5 miles northeast of the existing Willow Street Bridge, is the main area of the park and provides camping areas that accommodate trailers, motor homes, and tent camping (County of San Diego 2010c). The Summit Site also provides restrooms, showers, and a kitchen facility for visitors and is connected to the system of trails for horseback riding, hiking, scenic enjoyment, and wildlife observation. Implementation of the proposed project would not affect the Summit Site.

A second portion of the park, located approximately 1.25 miles northeast of the existing Willow Street Bridge between the Bonita Golf Course and Chula Vista Municipal Golf Course, is undeveloped and provides open space that is accessible by trails. This portion of the park includes the Morrison Pond and a trail staging area (County of San Diego 2010c). Implementation of the proposed project would not affect this portion of the park. A third portion of the park, adjacent to the western boundary of the proposed project, is also undeveloped and provides open space that is accessible by an equestrian trail with an at-grade crossing near Sweetwater Road and an undercrossing beneath the northern end of the existing Willow Street Bridge.

## **DISCUSSION**

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any public services: Fire protection? Police protection? Schools? Parks? Other public facilities?**





**Legend**

- Primary Impact Area
- Sweetwater Regional Park
- Municipal Boundaries

Source: Simon Wong 2010; SanGIS 2010; DigitalGlobe 2008

2,500 1,250 0 2,500 Feet

Scale: 1 = 30,000; 1 inch = 2,500 feet

**Figure 3.13-1**  
**Sweetwater Regional Park**



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**Less-than-significant Impact.****Fire Protection**

Implementation of the proposed project would reduce congestion on Willow Street and would reduce response times for fire and emergency services. Willow Street would remain open with one lane of traffic in each direction throughout the construction process, and a TMP would be prepared and implemented during construction of the proposed project to allow for continued fire and emergency access during construction. The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur. Therefore, the proposed project would not induce growth that would require construction of additional fire protection facilities.

**Police Protection**

Implementation of the proposed project would reduce congestion on Willow Street and would reduce response times for police services. Willow Street would remain open with one lane of traffic in each direction throughout the construction process, and a TMP would be prepared and implemented during construction of the proposed project to allow for continued police access. The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur. Therefore, the proposed project would not induce growth that would require construction of additional police protection facilities.

**Schools**

The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur. Therefore, the proposed project would not induce growth that would require construction of additional schools.

**Parks****Chula Vista Municipal Golf Course**

As described in Section 3.9a, construction of the replacement bridge would require a temporary construction easement of approximately 1.8 acres that would extend into the westernmost portion of the Chula Vista Municipal Golf Course. This temporary construction easement is needed to allow for construction access, staging, and storage of construction materials during construction of the bridge within the existing ROW. The easement would not affect any of the holes on the golf course. However, the temporary construction easement would require that the existing multipurpose path adjacent to and parallel to the east side of the Willow Street Bridge be temporarily realigned 20 to 30 feet east of its original location and inside the Chula Vista Municipal Golf Course. This realigned multipurpose path would have a 10-foot-high chain-link

fence with netting adjacent to the golf course side of the path to prevent errant golf balls from striking people using the path.

The temporary realigned multipurpose path would accommodate all existing uses for the existing multipurpose path, adhere to current standards, account for the bridge crossing over the low-flow channel, and create an unbroken path of travel. The realigned path would also serve as the temporary detour route for pedestrians, equestrians, and bicyclists. Once construction of the proposed project is completed, the original multipurpose path would be restored to its original location and the contractor would vacate the Chula Vista Municipal Golf Course, removing all construction equipment and other materials before striping and other final activities are completed for the bridge to begin operation. Additionally, the portion of the Chula Vista Municipal Golf Course cleared of vegetation for construction would be restored to its original condition through implementation of the project's revegetation plan. Therefore, impacts to the Chula Vista Municipal Golf Course would be less than significant.

#### Sweetwater Regional Park

As described in Section 3.9a, construction of the replacement bridge would require a temporary construction easement of approximately 0.63 acre that would extend into the easternmost portion of the Sweetwater Regional Park. This temporary construction easement is necessary to access the water lines that need to be relocated and to allow for construction access due to the narrow space within the existing ROW available for constructing the western portion of the replacement bridge. Additionally, construction of the proposed project would temporarily affect the at-grade equestrian crossing near Sweetwater Road and an equestrian undercrossing beneath the northern end of the existing Willow Street Bridge. Access to these two crossings would remain open during construction at all times. The traffic control plan for the proposed project would include provisions that would require construction activities to be stopped so horse riders and pedestrians could be flagged across the road or under the bridge safely by construction personnel when necessary at both crossing locations.

However, the proposed project would restore the existing equestrian trail crossings by incorporating a new at-grade crossing and a new undercrossing, with the new undercrossing meeting minimum vertical clearance requirements. Additionally, the contractor would vacate the Sweetwater Regional Park once construction was completed, removing all construction equipment and other materials before striping and other final activities are completed for the bridge to begin operation. The portion of the Sweetwater Regional Park cleared of vegetation for construction would be restored to its original condition through implementation of the project's revegetation plan. Therefore, impacts to the Sweetwater Regional Park would be less than significant.

#### **Other Public Facilities**

No other public facilities are located within the project area that could be impacted by the proposed project.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
<b>3.14</b>	<b>RECREATION.</b> Would the project:				
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities, which have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## ENVIRONMENTAL SETTING

As described in Section 3.9, land immediately surrounding the proposed project consists of recreational uses and open space. The Chula Vista Municipal Golf Course is located east of the proposed project, while undeveloped land associated with the Sweetwater Regional Park is to the west. Descriptions of these two recreation areas are provided in Section 3.13.

## DISCUSSION

- a) **Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**No Impact.** Implementation of the proposed project would replace the existing Willow Street Bridge in order to improve traffic circulation. This improved circulation may allow for improved access to existing recreation areas such as the Chula Vista Municipal Golf Course and the Sweetwater Regional Park. However, the proposed project would not directly generate additional trips to these existing recreation areas or induce future growth that would result in additional trips to these facilities. The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur. Additional physical deterioration at these recreation areas would be the result of future population growth within San Diego and throughout San Diego County that would occur independent of the proposed project. Therefore, the proposed project would not increase the use of existing recreational areas such that substantial physical deterioration of the recreational facilities would occur or be accelerated.

- b) **Does the project include recreational facilities or require the construction or expansion of recreational facilities, which have an adverse physical effect on the environment?**

**No Impact.** The proposed project would replace the existing Willow Street Bridge and does not include the construction of recreational facilities or require the construction or expansion of recreational facilities.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.15 TRANSPORTATION/TRAFFIC.</b> Would the project:				
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## ENVIRONMENTAL SETTING

### Methodology

#### Forecast Traffic Volumes

Kimley-Horn and Associates Inc. (Kimley-Horn) prepared a traffic study for the proposed project to determine how the proposed project would affect projected traffic volumes. Kimley-Horn utilized the SANDAG traffic forecast model that is based on the approved land uses and circulation element of the City and the approved land uses for the County of San Diego to develop build-out traffic volumes. The near-term scenario is defined as the construction phase of the replacement bridge and was based on traffic projections for the year 2012. The near-term traffic volumes were obtained by applying a growth factor based on the average annual growth between existing traffic counts and build-out traffic projections for roadway segments in the study area to existing traffic volumes. This average growth of these roadway segments was applied to existing peak-hour turning movements to obtain near-term peak-hour turning

movements. The build-out volume was less than the existing volume along Sweetwater Road between Valley Vista Road and Willow Street, which could be a result of changes in land uses and new roadways being constructed by the build-out scenario. The resulting negative growth rate was applied to obtain near-term volumes on that roadway.

### Study Area

The eight study intersections selected for analysis are:

- Bonita Road/Willow Street
- Willow Street/Sweetwater Road
- Bonita Road/Otay Lakes Road
- Bonita Road/Central Avenue
- Bonita Road/Plaza Bonita Road
- Sweetwater Road/Central Avenue
- Sweetwater Road/Bonita Center Way
- Sweetwater Road/Plaza Bonita Road

The following five roadway segments were selected for analysis:

- Bonita Road West of Willow Street
- Bonita Road East of Willow Street
- Sweetwater Road West of Willow Street
- Sweetwater Road East of Willow Street
- Willow Street between Sweetwater Road and Bonita Road

### Analysis Process

Kimley-Horn determined the operations at the study intersections for the a.m. and p.m. peak-hours and roadway segments for daily trips. Intersections were measured and quantified using the Synchro traffic analysis software package, while roadway segments were measured based on each segment's volume and assigned capacity. Results were compared to the City's standards to determine the LOS.

### Signalized Intersections

The 2000 Highway Capacity Manual published by the Transportation Research Board establishes a system whereby highway facilities are rated for their ability to process traffic volumes. The terminology "level of service" (LOS) is used to provide a "qualitative" evaluation based on certain "quantitative" calculations, which are related to empirical values.

The LOS for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria are

stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay. The criteria for the various levels of service designations are given in Table 3.15-1.

**Table 3.15-1**  
**LOS Criteria for Signalized Intersections<sup>1</sup>**

<b>LOS</b>	<b>Control Delay (sec/veh)</b>	<b>Description</b>
A	$\leq 10.0$	Operations with very low delay and most vehicles do not stop.
B	$> 10.0$ and $\leq 20.0$	Operations with good progression but with some restricted movement.
C	$> 20.0$ and $\leq 35.0$	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	$> 35.0$ and $\leq 55.0$	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	$> 55.0$ and $\leq 80.0$	Operations where there is significant delay, extensive queuing, and poor progression.
F	$> 80.0$	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Notes:

<sup>1</sup> 2000 Highway Capacity Manual, Chapter 16, Page 2, Exhibit 16

### Roadway Segments

To determine the LOS for a street segment on a daily basis, the average daily traffic (ADT) volume is compared to its maximum capacity for each type of roadway (arterial, collector, etc.) in the City or County of San Diego (Table 3.15-2). Roadway segment capacities in the study area were evaluated using LOS thresholds published by the City's adopted General Plan and the County of San Diego's Circulation Element. Volume-to-Capacity (v/c) ratios were calculated for each segment and were used to determine LOS for the roadway. The capacity of a roadway is equal to the maximum LOS C for the City and LOS D for the County of San Diego.

### **Existing Conditions**

#### Roadway Conditions

Willow Street: Willow Street is a two-lane road and includes a two-lane bridge spanning the Sweetwater River from Bonita Road in the south to Sweetwater Road in the north. It has a double yellow centerline separating the two lanes and a sidewalk along the east side of the bridge that is not ADA compliant. On-street parking and additional sidewalks exist near the Bonita Road intersection, where it has a much wider cross-section. Willow Street is classified as a four-lane major arterial in the City of Chula Vista and County of San Diego Circulation Elements.



**Table 3.15-2  
Roadway Segment Capacity and LOS**

<b>Circulation Element Roadways<sup>1</sup></b>	<b>Number of Lanes</b>	<b>Acceptable LOS (Jurisdiction)</b>	<b>LOS A</b>	<b>LOS B</b>	<b>LOS C</b>	<b>LOS D</b>	<b>LOS E</b>
<b>Major Road</b>	4	LOS D (County of San Diego)	14,800	24,700	29,600	<b>33,400</b>	37,000
<b>Class I Collector</b>	4	LOS C (City)	16,500	19,300	<b>22,000</b>	24,800	27,500
<b>Class II Collector<sup>2</sup></b>	3	LOS C (City)	12,750	14,900	<b>17,000</b>	19,150	21,250
<b>Class III Collector</b>	2	LOS C (City)	5,600	6,600	<b>7,500</b>	8,400	9,400

Notes:

Bold values correspond to the acceptable traffic volumes for each respective roadway.

<sup>1</sup> The Major Road classification is for the County of San Diego, which has an acceptable LOS D. The other classifications are for the City, which has an acceptable LOS C.

<sup>2</sup> The City does not have a classification for three-lane roadways; therefore, the volumes and capacities for the three-lane Class II Collector were calculated by taking the mean value between the two-lane Class II Collector and four-lane Class I Collector.

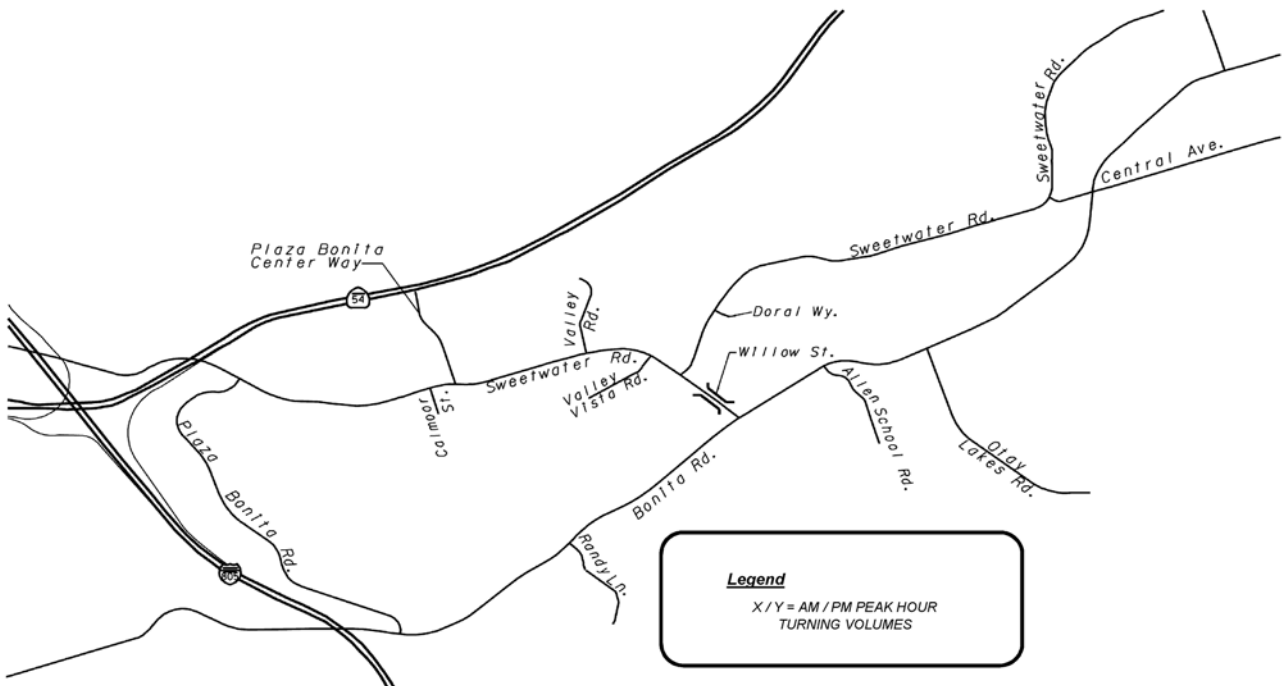
**Bonita Road:** Bonita Road is a four-lane divided roadway with a continuous two-way left-turn lane or raised median. West of Willow Street it has a speed limit of 50 mph with a painted median, which becomes a raised median approaching Plaza Bonita Road. There is no sidewalk or on-street parking provided and both sides of the street have a Class II Bike Lane. East of Willow Street, it is also a four-lane divided roadway, with a dual center left-turn lane. The speed limit is 35 mph and both sides of the street have a Class II Bike Lane and a sidewalk. East of Otay Lakes Road, Bonita Road transitions to two lanes and enters County of San Diego jurisdiction. Within the study area, Bonita Road is within the City's jurisdiction.

**Sweetwater Road:** Sweetwater Road is a two-lane undivided roadway with no sidewalk, curb, or parking in the vicinity of Willow Street. It has a speed limit of 45 mph and a double yellow centerline. It has a Class II Bike Lane in both directions. In National City (west of Calmoor Street), Sweetwater Road is a four-lane divided roadway with a painted median and sidewalks in both directions. Sweetwater Road is within the County of San Diego and National City jurisdictions.

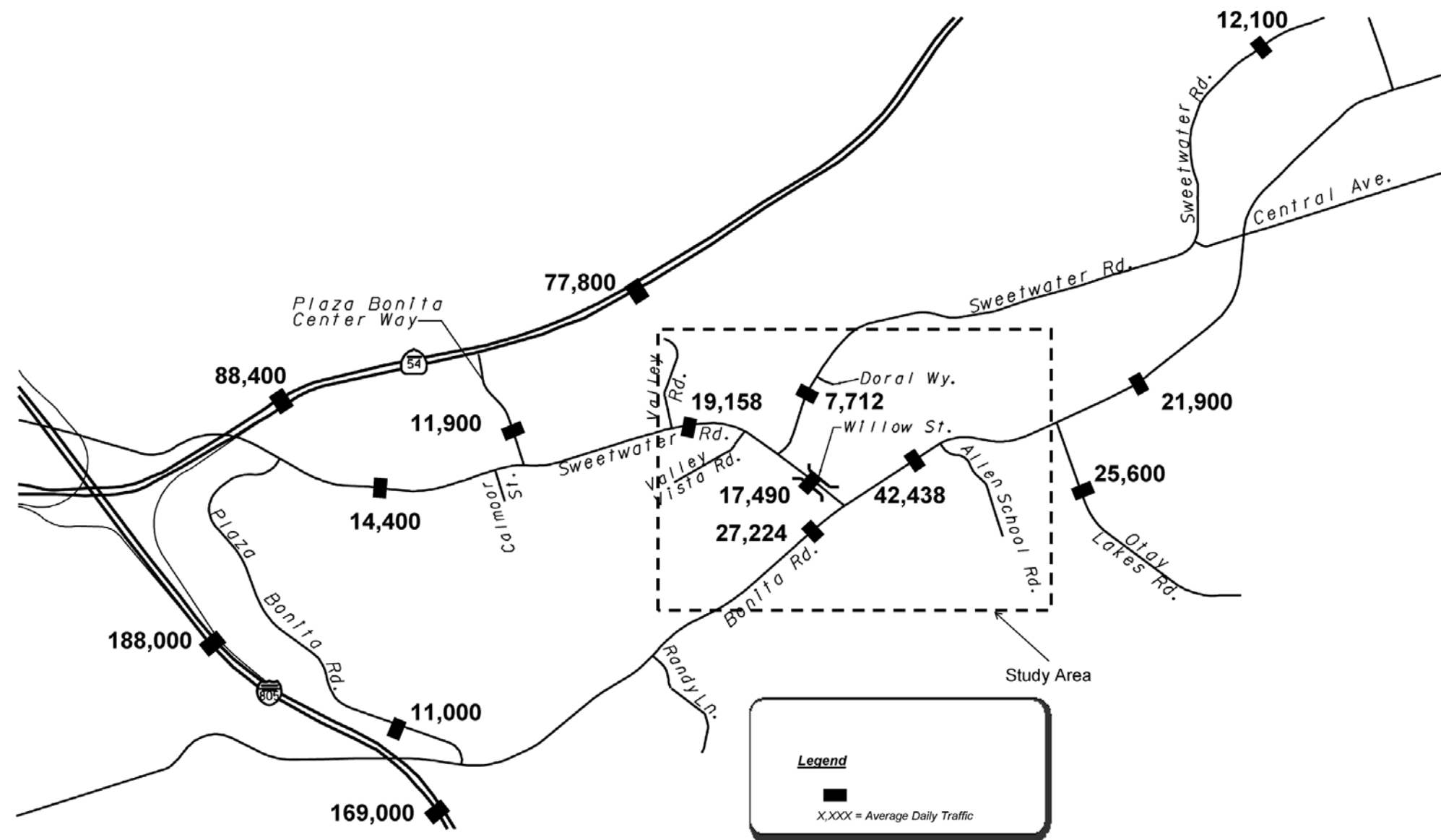
### Traffic Volumes

Existing peak-hour volume counts at the study intersections and existing ADT volumes along the roadway segments in the study area were provided by Field Data Services and counted in August 2005. The count data obtained in 2005 were compared with more recent data provided at select locations. The results indicate little change has occurred in traffic volumes in the area. The count data in 2005 are similar to or higher than more recent count data provided by the City of Chula Vista and the County of San Diego. Therefore, the count data obtained in 2005 were deemed adequate for use in this study. Figures 3.15-1 and 3.15-2 display the existing peak-hour volumes at the study intersections and the existing ADT volumes along the roadway segments,

<b>1</b> <div> <div>107 / 418</div> <div>220 / 603</div> <div>Plaza Bonita Center Way</div> </div> <div> <div>451 / 288</div> <div>383 / 253</div> <div>Sweetwater Rd</div> </div> <div> <div>178 / 369</div> <div>204 / 632</div> </div>	<b>2</b> <div> <div>58 / 72</div> <div>194 / 241</div> <div>Bonita Rd</div> </div> <div> <div>145 / 102</div> <div>462 / 206</div> <div>150 / 273</div> <div>Central Ave</div> </div> <div> <div>38 / 25</div> <div>146 / 407</div> <div>478 / 445</div> </div>	<b>3</b> <div> <div>529 / 378</div> <div>494 / 815</div> <div>Bonita Rd</div> </div> <div> <div>330 / 548</div> <div>598 / 1527</div> <div>Olav Lakes Rd</div> </div> <div> <div>1123 / 1120</div> <div>448 / 411</div> </div>	<b>4</b> <div> <div>105 / 627</div> <div>1 / 14</div> <div>32 / 139</div> <div>Plaza Bonita Rd</div> </div> <div> <div>21 / 78</div> <div>1220 / 1239</div> <div>13 / 19</div> <div>Bonita Rd</div> </div> <div> <div>134 / 621</div> <div>1084 / 1583</div> <div>18 / 33</div> </div>
<b>5</b> <div> <div>119 / 133</div> <div>569 / 719</div> <div>Sweetwater Rd</div> </div> <div> <div>562 / 490</div> <div>258 / 136</div> <div>Central Ave</div> </div> <div> <div>59 / 116</div> <div>110 / 198</div> </div>	<b>6</b> <div> <div>103 / 56</div> <div>8 / 14</div> <div>31 / 32</div> <div>Stockman St</div> </div> <div> <div>17 / 63</div> <div>415 / 320</div> <div>15 / 97</div> <div>Sweetwater Rd</div> </div> <div> <div>34 / 94</div> <div>196 / 712</div> <div>29 / 225</div> </div>	<b>7</b> <div> <div>119 / 110</div> <div>5 / 22</div> <div>257 / 944</div> <div>Willow St</div> </div> <div> <div>443 / 488</div> <div>920 / 778</div> <div>3 / 2</div> <div>Bonita Rd</div> </div> <div> <div>94 / 140</div> <div>590 / 1144</div> <div>2 / 7</div> </div>	<b>8</b> <div> <div>277 / 934</div> <div>64 / 267</div> <div>Sweetwater Rd</div> </div> <div> <div>230 / 154</div> <div>121 / 164</div> <div>Willow St</div> </div> <div> <div>483 / 486</div> <div>67 / 192</div> </div>



**Figure 3.15-1**  
**Existing Peak-Hour Intersection Volumes**



**Figure 3.15-2**  
**Existing ADT Volumes**

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respectively. Additional roadway segment volumes not included in the study area are depicted for reference.

### Intersection Analysis

Table 3.15-3 displays the intersection analysis under existing conditions. As shown in the table, all study intersections operate at an acceptable LOS during both peak periods, with the exception of:

- Central Avenue & Bonita Road (LOS E, PM peak period only)

### Roadway Segment Analysis

Table 3.15-4 displays the roadway segment analysis under existing conditions. As shown in the table, the following roadway segments function at LOS F under existing conditions:

- Bonita Road from Willow Street to Allen School Road
- Sweetwater Road from Valley Vista Road to Willow Street
- Willow Street from Sweetwater Road to Bonita Road

## **DISCUSSION**

- a) **Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?**

**No Impact.** Implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other development that would generate new traffic. The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur. Therefore, the proposed project would not cause an increase in traffic. A discussion of how the proposed project would affect traffic congestion is provided in Section 3.15b below.

- b) **Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?**

**Less-than-significant Impact.**

### **Near-Term Conditions (2012)**

The near-term baseline assumes the existing two-lane Willow Street Bridge. Traffic volumes were calculated by applying a growth rate to existing turning movements and ADT volumes.

**Table 3.15-3  
Existing Peak-Hour Intersection LOS Summary**

Intersection		Traffic Control	Peak Hour	Existing	
				Delay <sup>1</sup>	LOS <sup>2</sup>
1	Sweetwater Road & Plaza Bonita Center Way	Actuated-Uncoordinated Signal	AM	16.0	B
			PM	28.8	C
2	Central Ave & Bonita Road	Actuated-Uncoordinated Signal	AM	43.3	D
			PM	55.4	E
3	Bonita Road & Otay Lakes Road	Actuated-Uncoordinated Signal	AM	16.4	B
			PM	45.6	D
4	Bonita Road & Plaza Bonita Road	Actuated-Uncoordinated Signal	AM	22.0	C
			PM	42.1	D
5	Central Ave & Sweetwater Road	Actuated-Uncoordinated Signal	AM	11.2	B
			PM	13.4	B
6	Sweetwater Road & Stockman Street	Actuated-Uncoordinated Signal	AM	18.8	B
			PM	19.6	B
7	Bonita Road & Willow Street	Actuated-Uncoordinated Signal	AM	19.1	B
			PM	42.6	D
8	Sweetwater Road & Willow Street	Actuated-Uncoordinated Signal	AM	9.7	A
			PM	13.7	B

Notes:

Bold values indicate intersections operating at LOS E or F.

<sup>1</sup> Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

<sup>2</sup> LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0.



**Table 3.15-4  
Existing Roadway Segment LOS Summary**

Roadway Segment	Roadway Classification <sup>1</sup>	Acceptable Volume <sup>2</sup>	LOS E Capacity	ADT <sup>3</sup>	V/C Ratio <sup>4</sup>	LOS
<b>Bonita Road</b>						
Randy Lane to Willow Street	4 Lanes Major Road	33,400	37,000	27,224	0.74	<b>C</b>
Willow Street to Allen School Road	4 Lanes Major Road	33,400	37,000	42,438	1.15	<b>F</b>
<b>Sweetwater Road</b>						
Valley Vista Road to Willow Street	2 Lanes Class II Collector	12,000	15,000	19,158	1.28	<b>F</b>
Willow Street to Doral Way	2 Lanes Class II Collector	12,000	15,000	7,712	0.51	<b>A</b>
<b>Willow Street</b>						
Sweetwater Road to Bonita Road	2 Lanes Class III Collector	7,500	9,400	17,490	1.86	<b>F</b>

Notes:

Bold values indicate roadway segments operating at LOS D, E, or F.

<sup>1</sup> Existing roads street classification is based on the standards provided in the 2005 Chula Vista General Plan and the 2005 County of San Diego Circulation Element.

<sup>2</sup> In the City of Chula Vista, the acceptable volume outside the urban core represents a LOS C. In the County of San Diego, the acceptable volume represents a LOS D.

<sup>3</sup> Average Daily Traffic (ADT) volumes for the roadway segments were provided by Field Data Services and measured in August 2005.

<sup>4</sup> The v/c ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

### Traffic Volumes

Figures 3.15-3 and 3.15-4 show the near-term peak-hour volumes at the study intersections and the near-term ADT volumes along the study roadway segments, respectively. Additional roadway segment volumes not included in the study area are depicted for informational purposes. They were determined by increasing existing ADT volumes by the average growth rate, 1.1 percent per year, for segments in the study area.

### Intersection Analysis

Table 3.15-5 displays the intersection analysis under near-term conditions. This scenario would operate similar to existing conditions. As shown in Table 3.15-5, all study intersections operate at an acceptable LOS during both peak periods, with the exception of:

- Central Avenue and Bonita Road (LOS E, PM peak period only)
- Bonita Road and Otay Lakes Road (LOS E, PM peak period only)

**Table 3.15-5**  
**2012 Near-Term Conditions Peak-Hour Intersection LOS Summary**

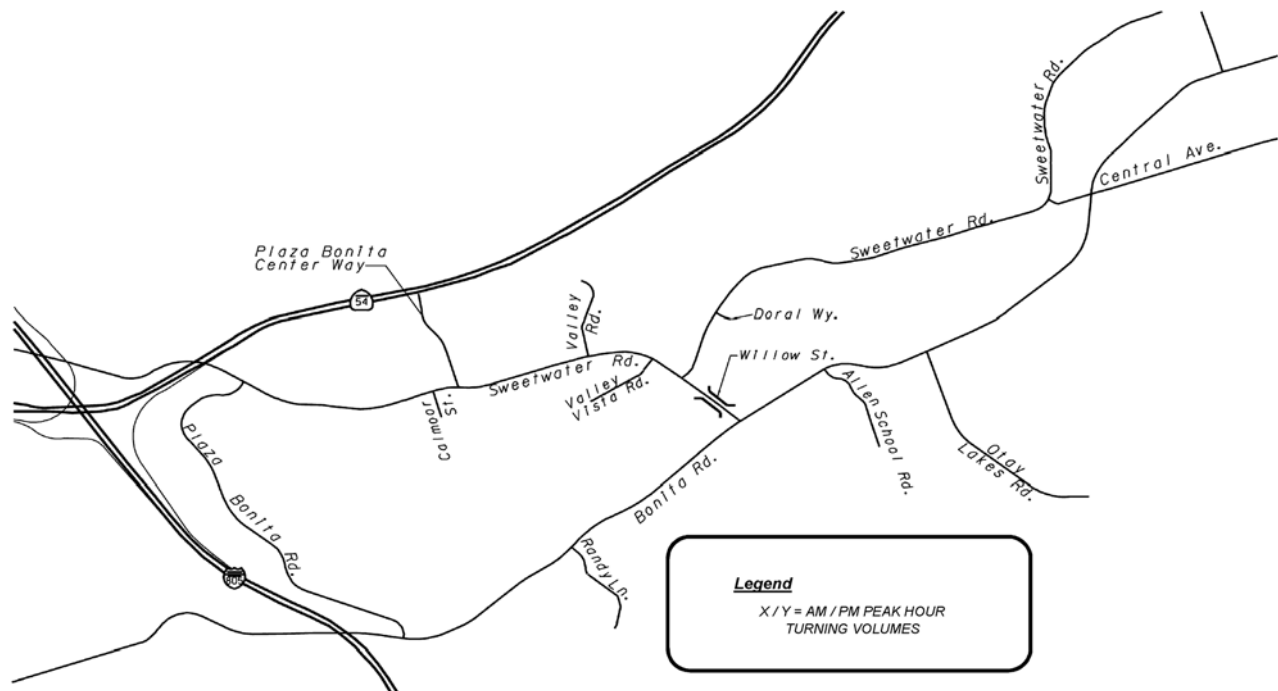
Intersection		Peak Hour	2012 Baseline	
			Delay <sup>1</sup>	LOS <sup>2</sup>
1	Sweetwater Road & Plaza Bonita Center Way	AM	18.2	B
		PM	35.0	D
2	Central Ave & Bonita Road	AM	53.4	D
		PM	65.7	<b>E</b>
3	Bonita Road & Otay Lakes Road	AM	18.5	B
		PM	65.2	<b>E</b>
4	Bonita Road & Plaza Bonita Road	AM	23.7	C
		PM	46.6	D
5	Central Ave & Sweetwater Road	AM	12.2	B
		PM	15.1	B
6	Sweetwater Road & Stockman Street	AM	19.3	B
		PM	20.0	C
7	Bonita Road & Willow Street	AM	20.3	C
		PM	50.8	D
8	Sweetwater Road & Willow Street	AM	14.0	B
		PM	16.4	B

Notes: Bold values indicate intersections operating at LOS E or F.

<sup>1</sup> Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

<sup>2</sup> LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0.

<b>1</b> <div> <div> 116 / 452  238 / 652  Plaza Bonita Center Way </div> <div> 488 / 312  414 / 274  Sweetwater Rd </div> </div> <div> 193 / 399  221 / 684 </div>	<b>2</b> <div> <div> 63 / 78  210 / 261  51 / 144  Bonita Rd </div> <div> 157 / 110  500 / 223  162 / 295  Central Ave </div> </div> <div> 41 / 27  158 / 440  517 / 481 </div> <div> 336 / 406  209 / 342  117 / 356 </div>	<b>3</b> <div> 572 / 409  534 / 882  Bonita Rd </div> <div> 357 / 593  647 / 1652  Otay Lakes Rd </div> <div> 1215 / 1212  485 / 445 </div>	<b>4</b> <div> <div> 114 / 678  1 / 15  35 / 150  Plaza Bonita Rd </div> <div> 23 / 84  1320 / 1340  14 / 21  Bonita Rd </div> </div> <div> 145 / 672  1173 / 1712  19 / 36 </div> <div> 51 / 61  1 / 17  23 / 43 </div>
<b>5</b> <div> <div> 129 / 144  616 / 778  Sweetwater Rd </div> <div> 608 / 530  279 / 147  Central Ave </div> </div> <div> 64 / 125  119 / 214 </div>	<b>6</b> <div> <div> 111 / 61  9 / 15  34 / 35  Stockman St </div> <div> 18 / 68  449 / 346  16 / 105  Sweetwater Rd </div> </div> <div> 37 / 102  212 / 770  31 / 243 </div> <div> 224 / 161  10 / 26  148 / 97 </div>	<b>7</b> <div> <div> 129 / 119  5 / 24  278 / 1021  Willow St </div> <div> 479 / 528  995 / 842  3 / 2  Bonita Rd </div> </div> <div> 102 / 151  638 / 1238  2 / 8 </div> <div> 13 / 24  11 / 42  11 / 8 </div>	<b>8</b> <div> <div> 300 / 1010  69 / 289  Sweetwater Rd </div> <div> 249 / 167  131 / 177  Willow St </div> </div> <div> 522 / 526  72 / 208 </div>



**Figure 3.15-3**  
**Near-Term Peak-Hour Intersection Volumes**

### Roadway Segment Analysis

Table 3.15-6 displays the roadway segment analysis under near-term conditions with the existing Willow Street Bridge and with the replacement bridge. This scenario would operate similar to existing conditions. As shown in the table, the following roadway segments function at LOS F under near-term conditions:

- Bonita Road from Willow Street to Allen School Road
- Sweetwater Road from Valley Vista Road to Willow Street
- Willow Street from Sweetwater Road to Bonita Road

### Roadway Segment Analysis

Table 3.15-6 displays the roadway segment analysis under near-term conditions with the existing Willow Street Bridge and with the replacement bridge. This scenario would operate similar to existing conditions. As shown in the table, the following roadway segments function at LOS F under near-term conditions:

- Bonita Road from Willow Street to Allen School Road
- Sweetwater Road from Valley Vista Road to Willow Street
- Willow Street from Sweetwater Road to Bonita Road

### **Near-Term With Project Conditions**

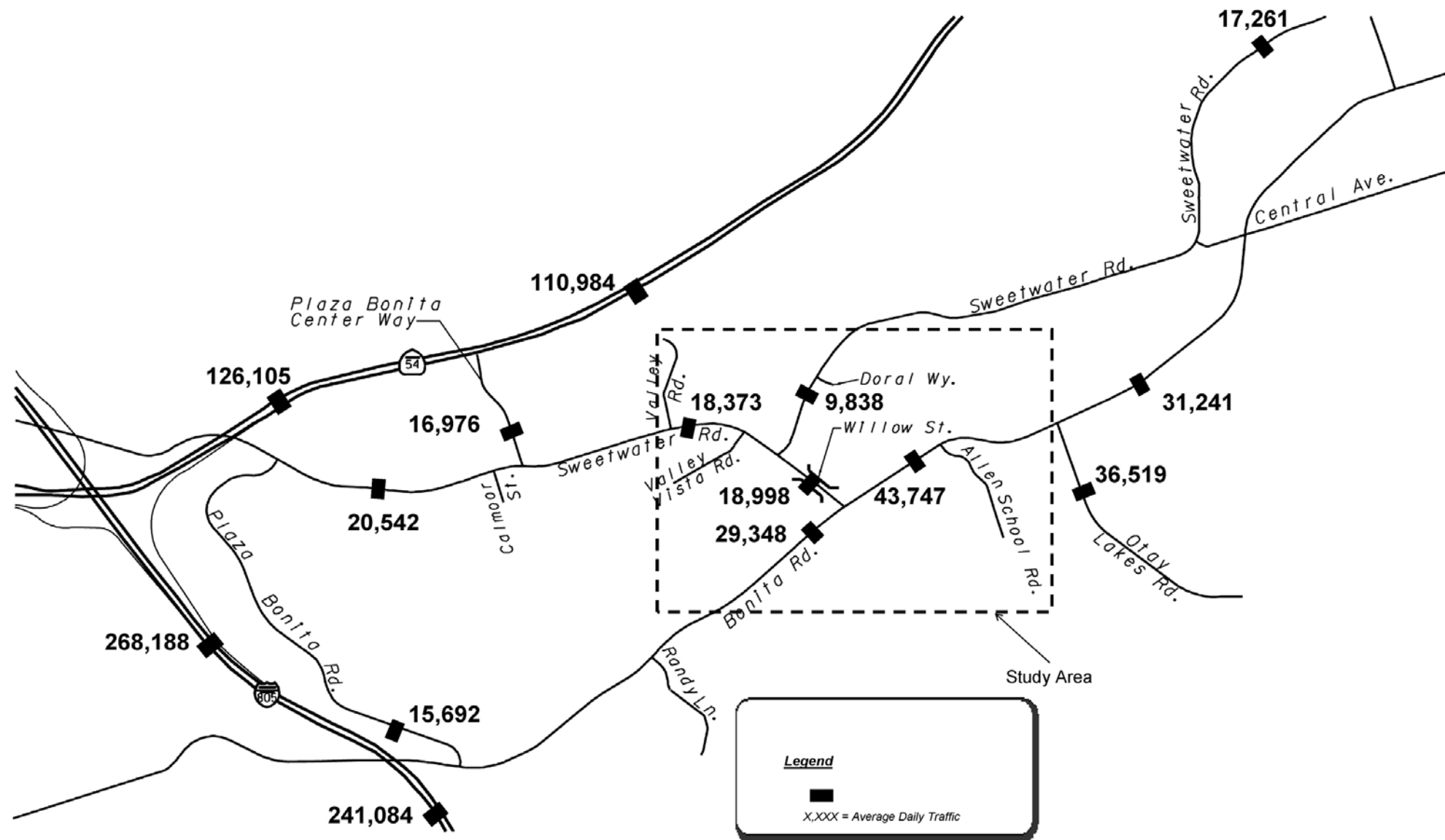
The near-term with project conditions scenario compares the operations of the proposed replacement bridge to near-term conditions.

### Traffic Volumes

Two lanes of traffic would remain open during construction at all times (one in each direction) precluding the need for road closures during construction. Therefore, no analysis was required for traffic detours due to construction, and traffic volumes would be the same as under the near-term conditions without the proposed project.

### Intersection Analysis

The expanded width of the replacement bridge would not impact intersection geometry. Therefore, the results of Highway Capacity Manual intersection delay calculations for the near-term conditions without the proposed project would be the same for the replacement bridge. Additionally, widening associated with the replacement bridge would improve the available queuing capacity.



**Figure 3.15-4**  
**Near-Term ADT Volumes**

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**Table 3.15-6**  
**2012 Conditions with and without Willow Street Replacement Bridge**  
**Roadway Segment LOS Summary**

Roadway Segment	Roadway Classification	Acceptable Volume <sup>1</sup>	LOS E Capacity	2012 with Existing Bridge			2012 with Replacement Bridge		
				ADT	V/C Ratio <sup>2</sup>	LOS	ADT	V/C Ratio	LOS
Bonita Road									
Randy Lane to Willow Street	4 Lanes Major Road	33,400	37,000	29,348	0.79	C	29,348	0.79	C
Willow Street to Allen School Road	4 Lanes Major Road	33,400	37,000	43,747	1.18	F	43,747	1.18	F
Sweetwater Road									
Valley Vista Road to Willow Street	2 Lanes Class II Collector	12,000	15,000	18,373	1.22	F	18,373	1.22	F
Willow Street to Doral Way	2 Lanes Class II Collector	12,000	15,000	9,838	0.66	B	9,838	0.66	B
Willow Street									
Sweetwater Road to Bonita Road	2 Lanes Class III Collector	7,500	9,400	18,998	2.02	F			
	4 Lanes Class I Collector	22,000	27,500				18,998	0.69	B

Notes:

Bold values indicate roadway segments operating at LOS D, E, or F.

<sup>1</sup> In the City of Chula Vista, the acceptable volume outside the urban core represents LOS C. In the County of San Diego, the acceptable volume represents LOS D.

<sup>2</sup> The v/c ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

### Roadway Segment Analysis

Table 3.15-6 compares the roadway segment LOS of the replacement bridge to the near-term conditions without the proposed project. As shown in Table 3.15-6, the replacement bridge would operate at LOS B during near-term conditions.

### **Build-Out Conditions (2030)**

The build-out baseline assumes the existing two-lane Willow Street Bridge. Traffic volumes were obtained from the traffic model developed for the City's 2004 General Plan Update. The model includes approved City of Chula Vista land use changes and approved County of San Diego land use changes.

### Traffic Volumes

Figures 3.15-5 and 3.15-6 display the build-out peak-hour volumes at the study intersections and ADT volumes along the roadway segments, respectively.

### Intersection Analysis

Table 3.15-7 displays the intersection analysis under build-out conditions. As shown in Table 3.15-7, all study intersections operate at an acceptable LOS during both peak periods, with the exception of:

- Central Avenue and Bonita Road (LOS F, AM and PM peak periods)
- Bonita Road and Otay Lakes Road (LOS F, PM peak period)
- Bonita Road and Plaza Bonita Road (LOS F, PM peak period)
- Bonita Road and Willow Street (LOS F, PM peak period)
- Sweetwater Road and Willow Street (LOS E, PM peak period)

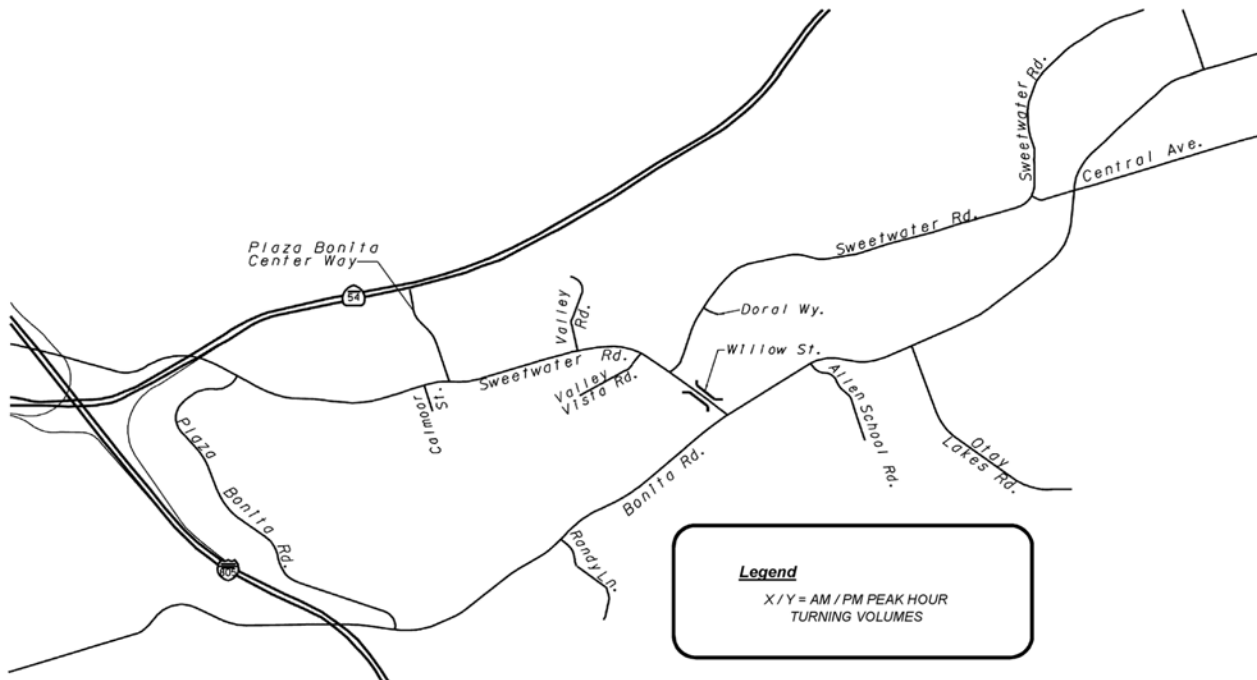
### Roadway Segment Analysis

Table 3.15-8 displays the roadway segment analysis under build-out conditions with the existing Willow Street Bridge and with the replacement bridge. As shown in Table 3.15-8, each of the five roadway segments in the study area functions at LOS E or F under build-out conditions.

### **Build-Out with Project Conditions**

The build-out with project scenario compares the operations of the replacement bridge to build-out conditions.

<b>1</b> <div> <div>151 / 548 249 / 686 Plaza Bonita Center Way</div> <div>518 / 323 460 / 303 Sweetwater Rd</div> </div> <div> <div>243 / 484 241 / 763</div> </div>	<b>2</b> <div> <div>18 / 13 319 / 459 Bonita Rd</div> <div>50 / 13 157 / 22 335 / 365 Central Ave</div> </div> <div> <div>10 / 6 26 / 56 601 / 740</div> <div>537 / 562 330 / 472 155 / 519</div> </div>	<b>3</b> <div> <div>1219 / 1233 219 / 329 Bonita Rd</div> </div> <div> <div>802 / 1224 908 / 2286 Otay Lakes Rd</div> <div>1584 / 1517 195 / 105</div> </div>	<b>4</b> <div> <div>62 / 597 6 / 18 67 / 151 Plaza Bonita Rd</div> <div>57 / 87 1968 / 2174 37 / 42 Bonita Rd</div> </div> <div> <div>93 / 584 1813 / 2753 16 / 61</div> <div>50 / 105 3 / 19 75 / 86</div> </div>
<b>5</b> <div> <div>554 / 514 447 / 605 Sweetwater Rd</div> <div>491 / 387 297 / 157 Central Ave</div> </div> <div> <div>306 / 472 128 / 254</div> </div>	<b>6</b> <div> <div>92 / 49 9 / 16 34 / 37 Stockman St</div> <div>22 / 70 476 / 360 22 / 136 Sweetwater Rd</div> </div> <div> <div>28 / 78 219 / 806 28 / 225 Plaza Bonita Rd</div> <div>212 / 148 9 / 26 176 / 125</div> </div>	<b>7</b> <div> <div>248 / 238 11 / 45 400 / 1569 Willow St</div> <div>716 / 786 1665 / 1407 5 / 4 Bonita Rd</div> </div> <div> <div>205 / 293 1066 / 2074 6 / 16</div> <div>28 / 49 21 / 79 19 / 15</div> </div>	<b>8</b> <div> <div>315 / 1234 72 / 302 Sweetwater Rd</div> <div>288 / 163 428 / 572 Willow St</div> </div> <div> <div>646 / 577 238 / 655</div> </div>



**Figure 3.15-5**  
**Build-Out Peak-Hour Intersection Volumes**

**Table 3.15-7  
2030 Build-Out Conditions  
Peak-Hour Intersection LOS Summary**

Intersection		Peak Hour	2030 Baseline	
			Delay <sup>1</sup>	LOS <sup>2</sup>
1	Sweetwater Road & Plaza Bonita Center Way	AM	21.6	C
		PM	47.9	D
2	Central Ave & Bonita Road	AM	97.1	<b>F</b>
		PM	162.4	<b>F</b>
3	Bonita Road & Otay Lakes Road	AM	29.0	C
		PM	88.3	<b>F</b>
4	Bonita Road & Plaza Bonita Road	AM	35.0	D
		PM	114.8	<b>F</b>
5	Central Ave & Sweetwater Road	AM	16.7	B
		PM	28.0	C
6	Sweetwater Road & Stockman Street	AM	18.1	B
		PM	20.5	C
7	Bonita Road & Willow Street	AM	47.0	D
		PM	ECL	<b>F</b>
8	Sweetwater Road & Willow Street	AM	25.0	C
		PM	70.9	<b>E</b>

Notes:

Bold values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Shown when delays exceed 180 seconds.

<sup>1</sup> Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

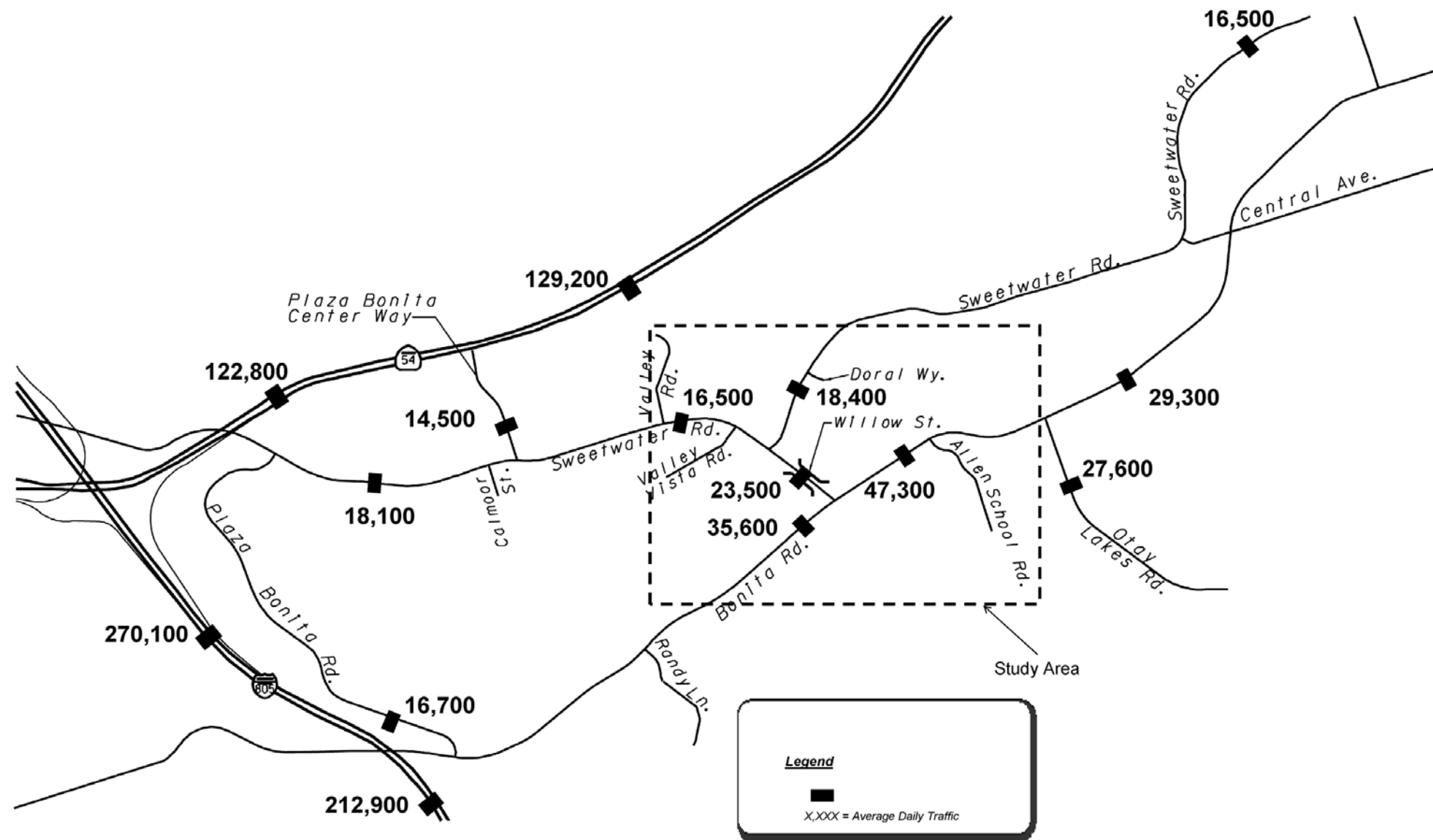
<sup>2</sup> LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.

### Traffic Volumes

Two lanes of traffic would remain open during construction at all times (one in each direction) precluding the need for road closures during construction. Therefore, no analysis was required for traffic detours as construction and traffic volumes would be the same under the build-out conditions without the proposed project.

### Intersection Analysis

The results of intersection delay for the replacement bridge would remain the same. However, the widened replacement bridge would decrease delay resulting from queuing at the intersections of Sweetwater Road/Willow Street and Bonita Road/Willow Street. Widening of the bridge



**Figure 3.15-6**  
**Build-Out ADT Volumes**

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**Table 3.15-8**  
**2030 with and without Willow Street Bridge Conditions**  
**Roadway Segment LOS Summary**

Roadway Segment	Roadway Classification	Acceptable Volume <sup>1</sup>	LOS E Capacity	2030 with Existing Bridge			2030 with Replacement Bridge		
				ADT	V/C Ratio <sup>2</sup>	LOS	ADT	V/C Ratio	LOS
Bonita Road									
Randy Lane to Willow Street	4 Lanes Major Road	33,400	37,000	35,600	0.96	E	35,600	0.96	E
Willow Street to Allen School Road	4 Lanes Major Road	33,400	37,000	47,300	1.28	F	47,300	1.28	F
Sweetwater Road									
Valley Vista Road to Willow Street	2 Lanes Class II Collector	12,000	15,000	16,500	1.10	F	16,500	1.10	F
Willow Street to Doral Way	2 Lanes Class II Collector	12,000	15,000	18,400	1.23	F	18,400	1.23	F
Willow Street									
Sweetwater Road to Bonita Road	2 Lanes Class III Collector	7,500	9,400	23,500	2.50	F			
	4 Lanes Class I Collector	22,000	27,500				23,500	0.85	D

Notes:

Bold values indicate roadway segments operating at LOS D, E, or F.

<sup>1</sup> In the City of Chula Vista, the acceptable volume outside the urban core represents LOS C. In the County of San Diego, the acceptable volume represents LOS D.

<sup>2</sup> The v/c ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

provides more queuing capacity and reduces the number of vehicles being denied from accessing their turn pocket.

### Roadway Segment Analysis

Willow Street would continue to operate at LOS F with the replacement bridge under build-out conditions. However, the v/c ratio would decrease by 1.65 (from 2.50 to 0.85). This suggests that operations along Willow Street would improve to be nearly three times as efficient as the current configuration.

### Queuing

Field observations showed that excessive queuing forms at intersections adjacent to the Willow Street Bridge. The intersection analysis described above does not portray the extent to which queuing is present at these intersections.

In the morning peak period, northbound traffic at the Willow Street and Sweetwater Road intersection is projected to block the entry to the channelized right-turn lane. About four cars stopped in the through lane would block entry to this right-turn lane. As a result, right and through vehicles are combined in traffic on the bridge for its entire length and nearly to the Bonita Road and Willow Street intersection. Adding a second northbound lane on the bridge would eliminate the queue for right-turning vehicles and substantially reduces the through-lane queue.

In the afternoon peak period, the southbound queue from the left-turn pocket at the intersection of Bonita Road and Willow Street is projected to spill onto the bridge. When this occurs, all southbound traffic would combine in the single lane on the bridge to create excessive queuing. The simulation actually shows queuing through the Sweetwater Road and Willow Street intersection toward the Sweetwater Road and Plaza Bonita Center Way intersection. Widening the bridge to allow a second southbound lane would give the left-turning vehicles a lane to queue in and allow the through and right-turning vehicles to bypass the queue and reach the intersection of Bonita Road and Willow Street.

### **Sweetwater Road Widening**

The County of San Diego has long-term plans to widen Sweetwater Road north of Willow Street to four lanes such that it would align with a four-lane Willow Street Bridge. The County of San Diego Circulation Element describes this section of Sweetwater Road as a four-lane roadway. Also, SANDAG Revenue Constrained 2030 RTP has identified widening of Sweetwater Road from Willow Street to Valley Vista Road as a programmed improvement. These future plans to widen Sweetwater Road would complement the proposed project. Therefore, the proposed project would not restrict consideration of a future improvement and is consistent with the LAPG and the Highway Bridge Program federal funding source.

Widening of Sweetwater Road to either Valley Vista Road or Plaza Bonita Center Way would provide additional benefits but is not considered part of the proposed project. The widening of Sweetwater Road from Willow Street to Valley Vista Road would change the intersection geometrics at the intersection of Sweetwater Road and Willow Street. The westbound right-turn movement would become a free movement with its own receiving lane instead of being a yield-controlled channelization, reducing delay and queues along Sweetwater Road. The southbound movement could have two through lanes and a left-turn lane, or remain as a single through lane and a left-turn lane but with a dedicated left-turn lane instead of just a turn pocket. The volumes suggest that a second through lane with a left-turn pocket configuration would operate more effectively. Having two southbound lanes also helps reduce the length of queues since it allows for the through and right-turning vehicles to be in one lane and the left-turning vehicles to be in the other lane instead of all southbound traffic having to share one lane as they approach the intersection of Sweetwater Road and Willow Street. Widening to Plaza Bonita Center Way would change the intersection geometrics at the intersection of Sweetwater Road and Plaza Bonita Center Way by adding a second westbound and second westbound through lane.

Table 3.15-9 shows the resulting intersection analysis with the revised geometrics from widening Sweetwater Road to a four-lane road north of Willow Street. As shown in Table 3.15-9, the intersections of Sweetwater Road and Willow Street, and Sweetwater Road and Plaza Bonita Center Way would see a reduction in delay with the Sweetwater Road and Willow Street intersection improving from LOS E to LOS D.

#### Roadway Segment Analysis

The roadway operations with the widening of Sweetwater Road are included in Table 3.15-10. Widening Sweetwater Road from Valley Vista Road to Willow Street would improve LOS along this segment of Sweetwater Road from LOS F to LOS B, which would provide a significant improvement to the roadway LOS. The proposed widening to Plaza Bonita Center Way extends beyond the roadway segment study area.

Overall, the proposed project would not result in any increases in LOS, v/c ratio, or intersection delay over what is projected for the build-out scenario without the proposed project and would result in decreases in these values for some intersections and roadway segments. Furthermore, these decreases in LOS, v/c ratio, or intersection delay would be decreased further by widening of the Sweetwater Road, which is proposed to occur independently of the proposed project. Therefore, the proposed project would not cause exceedances, either individually or cumulatively, of any LOS standards beyond what is projected for the build-out condition without the replacement bridge and would result in decreases in these values for some intersections.

#### **c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**No Impact.** The proposed project does not include any tall structures or new features that could affect air traffic patterns or introduce new safety hazards related to air traffic. Therefore,

**Table 3.15-9**  
**2030 Build-Out with Additional Widening Conditions**  
**Peak-Hour Intersection LOS Summary**

Intersection		Peak Hour	2030 Baseline		2030 with Widening To Valley Vista Road		2030 with Widening To Plaza Bonita Center Way	
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
1	Sweetwater Road & Plaza Bonita Center Way	AM	21.6	C	21.6	C	19.7	B
		PM	47.9	D	47.9	D	42.3	D
2	Central Ave & Bonita Road	AM	97.1	<b>F</b>	97.1	<b>F</b>	97.1	<b>F</b>
		PM	162.4	<b>F</b>	162.4	<b>F</b>	162.4	<b>F</b>
3	Bonita Road & Otay Lakes Road	AM	29.0	C	29.0	C	29.0	C
		PM	88.3	<b>F</b>	88.3	<b>F</b>	88.3	<b>F</b>
4	Bonita Road & Plaza Bonita Road	AM	35.0	D	35.0	D	35.0	D
		PM	114.8	<b>F</b>	114.8	<b>F</b>	114.8	<b>F</b>
5	Central Ave & Sweetwater Road	AM	16.7	B	16.7	B	16.7	B
		PM	28.0	C	28.0	C	28.0	C
6	Sweetwater Road & Stockman Street	AM	18.1	B	18.1	B	18.1	B
		PM	20.5	C	20.5	C	20.5	C
7	Bonita Road & Willow Street	AM	47.0	D	47.0	D	47.0	D
		PM	ECL	<b>F</b>	ECL	<b>F</b>	ECL	<b>F</b>
8	Sweetwater Road & Willow Street	AM	25.0	C	24.9	C	24.9	C
		PM	70.9	<b>E</b>	41.2	D	41.2	D

Notes:

Bold values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Shown when delays exceed 180 seconds.

<sup>1</sup> Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

<sup>2</sup> LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0.

**Table 3.15-10**  
**2030 Build-Out with Additional Widening Conditions**  
**Roadway Segment LOS Summary**

Roadway Segment	Roadway Classification <sup>1</sup>	Acceptable Volume <sup>2</sup>	Capacity	2030 Baseline (Existing Bridge and No Widening)			2030 With Replacement Bridge and Widening		
				ADT	V/C Ratio <sup>3</sup>	LOS	ADT	V/C Ratio	LOS
Bonita Road									
Randy Lane to Willow Street	4 Lanes Major Road	33,400	37,000	35,600	0.96	E	35,600	0.96	E
Willow Street to Allen School Road	4 Lanes Major Road	33,400	37,000	47,300	1.28	F	47,300	1.28	F
Sweetwater Road									
Valley Vista Road to Willow Street	2 Lanes Class II Collector	12,000	15,000	16,500	1.10	F			
	4 Lanes Class I Collector	22,000	27,500				16,500	0.60	B
Willow Street to Doral Way	2 Lanes Class II Collector	12,000	15,000	18,400	1.23	F	18,400	1.23	F
Willow Street									
Sweetwater Road to Bonita Road	2 Lanes Class III Collector	7,500	9,400	23,500	2.50	F			
	4 Lanes Class I Collector	22,000	27,500				23,500	0.85	D

Notes:

Bold values indicate roadway segments operating at LOS D, E, or F.

<sup>1</sup> The City of Chula Vista does not have a classification for three-lane roadways; therefore, the volumes and capacities for the 3-Lanes Class II Collector were calculated by taking the mean value between the 2-Lanes Class III Collector and 4-Lanes Class I Collector.

<sup>2</sup> In the City of Chula Vista, the acceptable volume outside the urban core represents LOS C. In the County of San Diego, the acceptable volume represents LOS D.

<sup>3</sup> The v/c ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

implementation of the proposed project would not result in any impacts related to air traffic patterns.

**d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**No Impact.** The proposed project was designed to meet all applicable design standards related to safety and, therefore, would either meet or improve upon existing levels of safety for the existing Willow Street Bridge and its corresponding intersections. Therefore, implementation of the proposed project would not increase design hazards or result in any new design hazards along compared to the existing Willow Street Bridge.

**e) Result in inadequate emergency access?**

**Less-than-significant Impact.** Willow Street would remain open with one lane of traffic in each direction throughout the construction process, and a TMP would be prepared and implemented during construction of the proposed project to allow for continued fire and emergency access during construction.

**f) Result in inadequate parking capacity?**

**Less-than-significant Impact.** Parking is not allowed along the existing Willow Street Bridge. Street parking is allowed on Willow Street near the intersection with Bonita Road. This street parking is used infrequently due to the parking lots for the businesses adjacent to the proposed project. Parking near this intersection would be prohibited during construction of the proposed project. However, loss of this parking would be temporary and parking on Willow Street near the intersection with Bonita Road would be allowed once construction was completed. Therefore, temporary loss of street parking along Willow Street would be less than significant.

As described in Section 3.9a, the Kaiser Permanente Medical Center would temporarily lose seven parking spaces near this access point. The Kaiser Permanente Medical Center currently has approximately 375 parking spaces. Consequently, the temporary loss of seven parking spaces would result in a reduction of approximately two percent of existing parking. Once construction is complete, the project proposes to reinstate the seven parking spaces. Therefore, temporary loss of parking at the Kaiser Permanente Medical Center would be less than significant.

**g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?**

**Less-than-significant Impact.** Implementation of the proposed project would temporarily affect existing pedestrian/equestrian facilities adjacent to the proposed project. Construction of the replacement bridge would require a temporary construction easement that would extend into the Chula Vista Municipal Golf Course that would require that the existing multipurpose path adjacent to and parallel to the east side of the Willow Street Bridge be temporarily realigned 20 to 30 feet east of its original location. However, the temporary realigned multipurpose path would accommodate all existing uses for the existing multipurpose path, adhere to current

standards, account for the bridge crossing over the low-flow channel, and create an unbroken path of travel. The realigned path would also serve as the temporary detour route for pedestrians, equestrians, and bicyclists. Once construction of the proposed project is completed, the original multipurpose path would be restored to its original location.

Similarly, construction of the proposed project would temporarily affect the at-grade equestrian crossing near Sweetwater Road and an equestrian undercrossing beneath the northern end of the existing Willow Street Bridge associated with the Sweetwater Regional Park. Access to these two crossings would remain open during construction at all times. The traffic control plan for the proposed project would include provisions that would require construction activities to be stopped so horse riders and pedestrians could be flagged across the road or under the bridge safely by construction personnel when necessary at both crossing locations. The proposed project would restore the existing equestrian trail crossings by incorporating a new at-grade crossing and a new undercrossing, with the new undercrossing meeting minimum vertical clearance requirements.

Willow Street would remain open with one lane of traffic in each direction throughout the construction process, which would allow bus service to continue to use Willow Street. Implementation of the proposed project would include construction of two 8-foot bike lanes (Class II)/shoulders and two 5-foot sidewalks, which would improve options for alternative transportation over the existing bridge. Therefore, impacts related to adopted policies, plans, or programs supporting alternative transportation would be less than significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
<b>3.16</b>	<b>UTILITIES AND SERVICE SYSTEMS.</b> Would the project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
e)	Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## ENVIRONMENTAL SETTING

Several existing utility lines are located on the project site. Overhead power lines and telecommunications lines are located along the westerly side of the bridge and a gas line is suspended on the east side of the existing bridge. An existing 36-inch water line owned and operated by the Sweetwater Authority and an existing 32-inch water line owned and operated by the City of San Diego cross under the northwestern spans of the existing Willow Street Bridge. With respect to drainage, an existing triple corrugated steel pipe (CSP) culvert system and local drainage line, also made of CSP, both discharge at a common headwall located at the upstream side of the existing bridge. The existing culvert system begins just south of the intersection of Willow Street and Bonita Road and the local drainage line starts at an existing curb inlet at the northeastern corner of the intersection of Willow Street and Bonita Road.

The overhead power lines and telecommunications lines would need to be relocated to construct the western portion of the replacement bridge and may be relocated within the eastern bridge sidewalk. The gas line suspended on the east side of the existing bridge would need to be relocated prior to construction and may be relocated within the bridge section. The two water lines crossing under the northwestern spans may be protected-in-place with a concrete casing, or rerouted adjacent to the bridge on the southern side to avoid conflict with the bridge piles. The proposed replacement bridge would have the capacity to accommodate up to nine 4.5-inch-diameter conduits within the east and west sidewalk for dry utilities. A gas line, if required, may be constructed in a 10.75-inch-diameter casing within the slab cross section or cantilevered from the west side of the deck.

**DISCUSSION****a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

**No Impact.** Implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other types of development that would generate wastewater. Therefore, the proposed project would not result in any impacts related to wastewater treatment.

**b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**No Impact.** Implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other types of development that would use water or generate wastewater. Therefore, the proposed project would not require the construction of any new water or wastewater treatment facilities.

**c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less-than-significant Impact.** The existing drainage components associated with the existing Willow Street Bridge would be replaced in accordance with current City standards. These drainage improvements would accommodate the construction of the replacement bridge and would result in an improvement over the overall hydraulic performance of the existing drainage systems, which currently discharge at the Sweetwater River against the channel flow direction and cause sediment to accumulate and reduce pipe capacity. Therefore, replacement of the existing storm water drainage facilities would not result in significant environmental effects and impacts would be less than significant.

**d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**No Impact.** Implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other types of development that would require the use of any permanent water source. Therefore, the proposed project would not impact existing water supplies.

**e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

**No Impact.** Implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other types of development that would generate wastewater. Therefore, the proposed project would not impact an existing wastewater treatment provider.

**f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**Less-than-significant Impact.** Construction of the proposed project would likely generate waste associated with construction activities. This waste would be disposed of in conformance with all applicable local and state regulations pertaining to solid waste, including permitted capacity of the landfill serving the project area. Operation of the proposed project would not generate waste and, therefore, would not affect the permitted capacity of the landfill serving the project area. Therefore, impacts to existing landfill capacity would be less than significant.

**g) Comply with federal, state, and local statutes and regulations related to solid waste?**

**No Impact.** Implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other types of development that would generate solid waste. Therefore, the proposed project would not affect solid waste facilities.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
<b>3.17</b>	<b>CITY THRESHOLD STANDARDS.</b> Would the project adversely impact the City's Threshold Standards?				
a)	Library: The City shall construct 60,000 gross square feet (GSF) of additional library space, over the June 30, 2000 GSF total, in the area east of Interstate 805 by buildout. The construction of said facilities shall be phased such that the City will not fall below the city-wide ratio of 500 GSF per 1,000 population. Library facilities are to be adequately equipped and staffed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Police:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	1) Emergency Response: Properly equipped and staffed police units shall respond to 81 percent of "Priority One" emergency calls within seven (7) minutes and maintain an average response time to all "Priority One" emergency calls of 5.5 minutes or less.				
	2) Respond to 57 percent of "Priority Two" urgent calls within seven (7) minutes and				

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less-than-significant Impact with Mitigation Incorporated	Less-than-significant Impact	No Impact
maintain an average response time to all "Priority Two" calls of 7.5 minutes or less.				
c) Fire and Emergency Medical: Emergency response: Properly equipped and staffed fire and medical units shall respond to calls throughout the City within 7 minutes in 80% of the cases (measured annually).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Traffic: The Threshold Standards require that all intersections must operate at a Level of Service (LOS) "C" or better, with the exception that Level of Service (LOS) "D" may occur during the peak two hours of the day at signalized intersections. Signalized intersections west of I 805 are not to operate at a LOS below their 1991 LOS. No intersection may reach LOS "E" or "F" during the average weekday peak hour. Intersections of arterials with freeway ramps are exempted from this Standard.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Parks and Recreation Areas: The Threshold Standard for Parks and Recreation is 3 acres of neighborhood and community parkland with appropriate facilities/1,000 population east of I-805.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Drainage: The Threshold Standards require that storm water flows and volumes not exceed City Engineering Standards. Individual projects will provide necessary improvements consistent with the Drainage Master Plan(s) and City Engineering Standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Sewer: The Threshold Standards require that sewage flows and volumes not exceed City Engineering Standards. Individual projects will provide necessary improvements consistent with Sewer Master Plan(s) and City Engineering Standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Water: The Threshold Standards require that adequate storage, treatment, and transmission facilities are constructed concurrently with planned growth and that water quality standards are not jeopardized during growth and construction.  Applicants may also be required to participate in whatever water conservation or fee offset program the City of Chula Vista has in effect at the time of building permit issuance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## DISCUSSION

- a) **Library: The City shall construct 60,000 gross square feet (GSF) of additional library space, over the June 30, 2000 GSF total, in the area east of Interstate 805 by buildout. The construction of said facilities shall be phased such that the City will not fall below the city-wide ratio of 500 GSF per 1,000 population. Library facilities are to be adequately equipped and staffed.**

**No Impact.** As described in Section 3.12a, implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing. The proposed project would not extend any existing roadways or access into an undeveloped area or introduce any new roadways that could induce growth. The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur. Therefore, the proposed project would not hinder the City from reaching its goal of a citywide ratio of 500 GSF of library space per 1,000 population.

- b) **Police:**

- 1) **Emergency Response: Properly equipped and staffed police units shall respond to 81 percent of “Priority One” emergency calls within seven (7) minutes and maintain an average response time to all “Priority One” emergency calls of 5.5 minutes or less.**
- 2) **Respond to 57 percent of “Priority Two” urgent calls within seven (7) minutes and maintain an average response time to all “Priority Two” calls of 7.5 minutes or less.**

**No Impact.** As described in Section 3.13a, implementation of the proposed project would reduce congestion on Willow Street and would reduce response times for police services. Willow Street would remain open with one lane of traffic in each direction throughout the construction process, and a TMP would be prepared and implemented during construction of the proposed project to allow for continued police access during construction. The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur. Therefore, the proposed project would not induce growth that would increase the number of emergency calls police services would have to respond to. Therefore, the proposed project would not affect police emergency response times.

- c) **Fire and Emergency Medical: Emergency response: Properly equipped and staffed fire and medical units shall respond to calls throughout the City within 7 minutes in 80% of the cases (measured annually).**

**No Impact.** As described in Section 3.13a, implementation of the proposed project would reduce congestion on Willow Street and would reduce response times for fire and emergency services. Willow Street would remain open with one lane of traffic in each direction throughout the

construction process, and a TMP would be prepared and implemented during construction of the proposed project to allow for continued fire and emergency access during construction. The proposed project was developed to reduce existing and future traffic congestion from growth that has already occurred, is planned, or is projected to occur. Therefore, the proposed project would not induce growth that would increase the number of emergency calls fire and emergency medical services would have to respond to. Therefore, the proposed project would not affect fire and emergency medical services response times.

- d) **Traffic: The Threshold Standards require that all intersections must operate at a Level of Service (LOS) “C” or better, with the exception that Level of Service (LOS) “D” may occur during the peak two hours of the day at signalized intersections. Signalized intersections west of I 805 are not to operate at a LOS below their 1991 LOS. No intersection may reach LOS “E” or “F” during the average weekday peak hour. Intersections of arterials with freeway ramps are exempted from this Standard.**

**Less-than-significant Impact.** As described in Section 3.15b, the proposed project would not result in any increases in LOS at intersections over what is projected for the build-out scenario without the proposed project and would result in decreases in these values for some intersections. Furthermore, these decreases in LOS would be decreased further by widening of Sweetwater Road, which is proposed to occur independently of the proposed project. Therefore, although some intersections would operate below LOS D, the proposed project would not cause exceedances, either individually or cumulatively, of any LOS standards beyond what is projected for the build-out condition without the replacement bridge and would result in decreases in these values for some intersections.

- e) **Parks and Recreation Areas: The Threshold Standard for Parks and Recreation is 3 acres of neighborhood and community parkland with appropriate facilities/1,000 population east of I-805.**

**Less-than-significant Impact.** As described in Section 3.13a, the proposed project would result in temporary impacts to the Chula Vista Municipal Golf Course and Sweetwater Regional Park. However, both recreation facilities would be restored to their original condition once construction was completed. Additionally, implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing. The proposed project would not extend any existing roadways or access into an undeveloped area or introduce any new roadways that could induce growth. Therefore, the proposed project would not induce growth that would hinder the City from reaching their goal of a citywide ratio of 500 GSF of 3 acres of neighborhood and community parkland with appropriate facilities/1,000 population east of I-805.

- f) **Drainage: The Threshold Standards require that storm water flows and volumes not exceed City Engineering Standards. Individual projects will provide necessary**

**improvements consistent with the Drainage Master Plan(s) and City Engineering Standards.**

**Less-than-significant Impact.** As described in Section 3.16c, the existing drainage components associated with the existing Willow Street Bridge would be replaced in accordance with current City standards. These drainage improvements would accommodate the construction of the replacement bridge and would result in an improvement over the overall hydraulic performance of the existing drainage systems, which currently discharge at the Sweetwater River against the channel flow direction and cause sediment to accumulate and reduce pipe capacity. Therefore, replacement of the existing storm water drainage facilities would not result in significant environmental effects and impacts would be less than significant.

- g) **Sewer: The Threshold Standards require that sewage flows and volumes not exceed City Engineering Standards. Individual projects will provide necessary improvements consistent with Sewer Master Plan(s) and City Engineering Standards.**

**No Impact.** As described in Section 3.16e, implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other types of development that would generate wastewater. Therefore, the proposed project would not impact an existing wastewater treatment provider.

- h) **Water: The Threshold Standards require that adequate storage, treatment, and transmission facilities are constructed concurrently with planned growth and that water quality standards are not jeopardized during growth and construction.**

**Applicants may also be required to participate in whatever water conservation or fee offset program the City of Chula Vista has in effect at the time of building permit issuance.**

**No Impact.** As described in Section 3.16e, implementation of the proposed project would replace an existing bridge and does not include the construction of any new housing or other types of development that would generate wastewater. Therefore, the proposed project would not impact an existing wastewater treatment provider. As described in Section 3.8, implementation of construction BMPs would reduce impacts to water quality to a level less than significant. Since the proposed project would not include the construction of any new housing or other types of development that would require the use of any permanent water source, the proposed project would not impact existing water supplies and would not affect City water conservation efforts.



ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than- significant Impact with Mitigation Incorporated	Less-than- significant Impact	No Impact
<b>3.18</b>	<b>MANDATORY FINDINGS OF SIGNIFICANCE.</b>				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

- a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

**Less-than-significant Impact with Mitigation Incorporated.** All potentially significant impacts associated with the proposed project would be reduced to a level of less than significant with incorporation of all necessary mitigation measures. As Described in Section 3.4, implementation of mitigation measures BIO-1 thru BIO-10 would reduce impacts to biological resources to a level of less than significant. As described in Section 3.5, implementation of mitigation measure CULT-1 would minimize potential impacts to sensitive cultural resources should they be discovered during construction.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.)**

**Less-than-significant Impact with Mitigation Incorporated.** As discussed in applicable sections of this IS/MND, all potentially significant impacts would be reduced to a level of less than significant with incorporation of all necessary mitigation measures. Consequently, the proposed project would not result in any significant impacts that could contribute to cumulative impacts resulting from past, present, and future projects. Furthermore, the relative small size and isolated location of the proposed project would ensure that the proposed project would not contribute to cumulatively significant impacts.

- c) **Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?**

**Less-than-significant Impact with Mitigation Incorporated.** As discussed in applicable sections of this IS/MND, the proposed project would not cause any substantial adverse environmental effects on humans. The proposed project would not displace any homes or businesses and would not result in significant impacts related to aesthetics, air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, transportation/traffic, or utilities and service systems.

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## **5 LIST OF PREPARERS**

Bill Graham..... Principal  
Nick Larkin .....Project Manager/Environmental Analyst  
Bill Maddux ..... Environmental Planner/Acoustics and Air Quality Specialist  
Jeff Goodson .....Environmental Engineer, Acoustics and Air Quality Specialist



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## **6 SUMMARY AND SIGNATURE PAGE**

### **CONSULTATION**

#### Individuals and Organizations

City of Chula Vista

Jose Gomez, Senior Civil Engineer, Engineering Division

Greg Tscherch, Associate Engineer, Engineering Division

Benjamin Guerrero, Senior Planner, Development Services Department

Steve Power, Principal Planner, Development Services Department

Glen Laube, Associate Planner, Development Services Department

Khosro Aminpour, Senior Civil Engineer, Public Works Operation

Others:

Nick Larkin, AECOM

Gretchen Cummings, Cummings and Associates

Robert James, CALTRANS

Bill Maddux, AECOM

Jeff Goodson, AECOM

Applicant/Property Owner: City of Chula Vista

Agent: Jose Gomez, Senior Civil Engineer

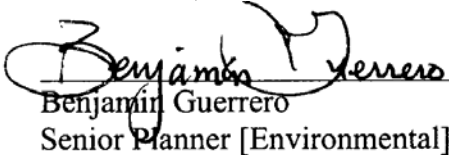
#### Documents

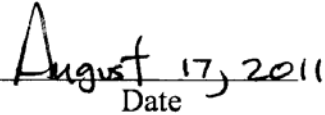
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- Floodplain Evaluation Report, Simon Wong Engineering, June 2011
- Preliminary Hydraulic Report, Chang Consultants, April 2011
- Drift Analysis, Chang Consultants, April 2011

#### Initial Study

This environmental determination is based on the attached Initial Study, and any comments received in response to the Notice of Initial Study. The report reflects the independent judgment of the City of Chula Vista. Further information regarding the environmental review of this project is available from the Chula Vista Planning and Building Department, 276 Fourth Avenue, Chula Vista, CA 91910.

  
Benjamin Guerrero  
Senior Planner [Environmental]

  
Date

#### **PROJECT REVISIONS OR MITIGATION MEASURES**

Project mitigation measures are contained in each subsection of Section 3.0 and Appendix A – Mitigation, Monitoring, and Reporting Program of this Initial Study/Mitigated Negative Declaration.

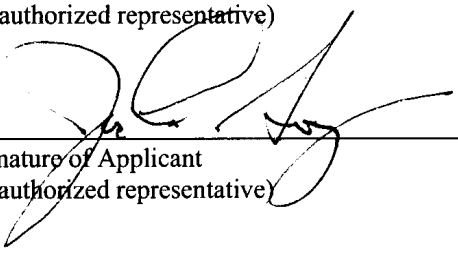
#### **AGREEMENT TO IMPLEMENT MITIGATION MEASURES**

By signing the line(s) provided below, the Applicant and Operator stipulate that they have each read, understood and have their respective company's authority to and do agree to the mitigation measures contained herein, and will implement same to the satisfaction of the Director of Development Services. Failure to sign the line(s) provided below prior to posting of this Mitigated Negative Declaration with the County Clerk shall indicate the Applicant's and Operator's desire that the Project be held in abeyance without approval and that the Applicant and Operator shall apply for an Environmental Impact Report.

Jose Gomez, Senior Civil Engineer

Printed Name and Title of Applicant  
(or authorized representative)

Date

  
Signature of Applicant  
(or authorized representative)

August 17, 2011  
Date

Printed Name and Title of Operator  
(if different from Applicant)

Date

Signature of Operator  
(if different from Applicant)

Date

## ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Less-than-significant Impact with Mitigation Incorporated" as indicated by the checklist on the previous pages.

<input checked="" type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agricultural Resources	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural and Paleontological Resources	<input type="checkbox"/>	Geology and Soils
<input checked="" type="checkbox"/>	Hazards and Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology and Water Quality	<input checked="" type="checkbox"/>	Land Use and Planning
<input type="checkbox"/>	Mineral Resources	<input checked="" type="checkbox"/>	Noise	<input type="checkbox"/>	Population and Housing
<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation/Traffic
<input type="checkbox"/>	Utilities and Service Systems	<input type="checkbox"/>	City Threshold Standards	<input type="checkbox"/>	Mandatory Findings of Significance

## DETERMINATION

On the basis of this initial evaluation:


I find that the proposed project **could not** have a significant effect on the environment, and a **Negative Declaration** will be prepared. ☐

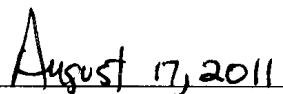
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A **Mitigated Negative Declaration** will be prepared. ☒

I find that the proposed project may have a significant effect on the environment, and an **Environmental Impact Report** is required. ☐

I find that the proposed project may have a significant effect(s) on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impacts" or "potentially significant unless mitigated." An **Environmental Impact Report** is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the proposed project could have a significant effect on the environment, there **will not** be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. An addendum has been prepared to provide a record of this determination. ☐

  
Benjamin Guerrero  
Senior Planner [Environmental]

  
Date

**APPENDIX A**

**MITIGATION, MONITORING, AND  
REPORTING PROGRAM**





**Willow Street Bridge Replacement Project  
Mitigation, Monitoring, and Reporting Program**

**IS-10-006**

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
Aesthetics						
AESTH-1: Construction of the proposed project will include Type ST-40 railing depicted in Figures 3.1-2, 3.1-4, and 3.1-6. Type ST-40 railing would be more consistent with the existing rural character and would allow for a greater degree of visibility through the railing, especially as seen from the roadway and the trail.	Final Plans and Specifications; Construction	Construction	City of Chula Vista			
Air Quality						
<u>AIR-1</u> : Prior to the approval of any grading permit, the following measures shall be placed as notes on all grading plans, and shall be implemented during grading of each phase of the project to minimize construction emissions:  <ul style="list-style-type: none"><li>Minimize simultaneous operation of multiple construction equipment units;</li><li>Use low pollutant-emitting construction equipment as practical;</li><li>Use electrical construction equipment as practical; Use catalytic reduction for gasoline-powered equipment;</li><li>Use injection timing retard for diesel-powered equipment;</li><li>Water the construction areas a minimum of twice daily to minimize fugitive dust;</li><li>Stabilize graded areas as quickly as possible to minimize fugitive dust;</li><li>Pave permanent roads as quickly as possible to minimize dust;</li><li>Use electricity from power poles instead of temporary generators during building, as feasible;</li><li>Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry;</li><li>Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads;</li><li>Remove any visible track-out into traveled public streets within 30 minutes of occurrence;</li></ul>	Final Plans and Specifications; Construction	Construction	City of Chula Vista; Air Pollution Control District			

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
<ul style="list-style-type: none"> <li>Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred;</li> <li>Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads;</li> <li>Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling; and</li> <li>Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph.</li> </ul>						
<b>Biological Resources</b>						
<u>BIO-1:</u> Temporary impacts to 0.055 acre of coastal sage scrub will be revegetated and restored to pre-existing conditions. The temporary impacts to 0.055 acre of coastal sage scrub are located on County-owned lands. Per the County's BMO, the mitigation ratio would be 1.5:1 for impacts to coastal sage scrub outside the preserve that are mitigated outside the preserve. However, a reduced 1:1 mitigation ratio has been proposed due to the temporary nature of the impacts. Mitigation will take the form of restoration of an equal amount of this habitat on-site once construction is complete. Additional mitigation may be required based upon ongoing negotiations with the resource agencies. Restoration of these temporary impacts to coastal sage scrub will begin immediately upon completion of construction and will be outlined in the conceptual and final mitigation plan. The City of Chula Vista will be responsible for the restoration of these temporary impacts to southern cottonwood-willow riparian forest and coastal sage scrub.	Final Plans and Specifications; Immediately after construction.	Post-Construction	City of Chula Vista			
<u>BIO-2:</u> To avoid any direct impacts to raptors and/or any migratory birds, removal of habitat that supports active nests on the proposed area of disturbance should occur outside of the breeding season for these species (January 15 to August 31). If removal of habitat on the proposed area of disturbance must occur during the breeding season, a City-approved biologist will be retained to conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey must be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The results of the pre-	Final Plans and Specifications; Construction.	Construction	City of Chula Vista			

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
construction survey will be reviewed and approved by the City prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan as deemed appropriate by the City's Assistant City Manager/Development Services Director will be prepared and will include proposed measures to be implemented to ensure that disturbance of breeding activities is avoided. The report or mitigation plan will be prepared and implemented to the satisfaction of the City's Assistant City Manager/Development Services Director. The City's Mitigation Monitor will verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. The City of Chula Vista will be responsible for implementing restrictions on clearing and grubbing of upland habitats.						
<u>BIO-3</u> : Temporary impacts to 0.755 acre of southern cottonwood-willow riparian forest will be revegetated and restored to pre-existing conditions. Additional mitigation may be required based upon ongoing negotiations with the resource agencies. Restoration of these temporary impacts to southern cottonwood-willow riparian forest will begin immediately upon completion of construction and will be outlined in the conceptual and final mitigation plan. The City of Chula Vista will be responsible for the restoration of these temporary impacts to southern cottonwood-willow riparian forest and coastal sage scrub.	Final Plans and Specifications; Immediately after Construction	Post-Construction	City of Chula Vista			
<u>BIO-4</u> : Permanent impacts to 0.442 acre of southern cottonwood-willow riparian forest will be offset through the off-site creation/enhancement of 0.537 ha (1.326 ac) of southern cottonwood-willow riparian forest prior to, or concurrent with project construction. The City of Chula Vista will be responsible for the off-site creation/enhancement of southern cottonwood-willow riparian forest.	Final Plans and Specifications; Pre-Construction/ Construction	Post-Construction	City of Chula Vista			
<u>BIO-5</u> : No clearing and grubbing of native riparian habitats may occur from March 15 through September 15 to avoid the breeding season of the least Bell's vireo. If vegetation clearing cannot be restricted to outside the breeding season, a determination regarding the occupancy of the site by least Bell's vireo must be made. A qualified biologist will conduct a pre-construction clearance survey 1 week prior to the start of construction or on March 15,	Final Plans and Specifications; Construction	Construction	City of Chula Vista			

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
whichever is later. Construction activities will cease during the time of the survey. If no least Bell's vireos are detected during the pre-construction clearance survey, vegetation clearing can commence or continue. However, if least Bell's vireo are detected during the pre-construction clearance survey, all vegetation clearing activities will stop until September 16 or until a qualified biologist can demonstrate that the least Bell's vireo have left the site for the season. The City of Chula Vista will be responsible for implementing restrictions on clearing and grubbing of native riparian habitats.						
<b>BIO-6:</b> If construction work is necessary during the bird breeding season (February 15 to September 15) that would generate noise levels exceeding 60 dBA or ambient noise levels (whichever is greater) in the adjacent suitable habitat, avian surveys will be conducted to ensure that the construction noise will not result in impacts to breeding birds. A minimum of three surveys will be conducted at 4 to 5-day intervals during the 2-week period before project-related activities begin/continue during the breeding season. Each survey will cover all suitable habitat where there is a possibility of indirect noise effects resulting from project construction. Surveys for breeding birds will last at least 3 hours between the hours of 0600 and 1200. The surveys will be performed by a qualified biologist. <sup>1</sup> Additional surveys will be done once every 2 weeks during project construction in the breeding season. The City will be notified if any breeding birds are found. If breeding birds are present in the vicinity of the site and there is a possibility of indirect noise effects, then a noise consultant will be employed and noise monitoring will be conducted. If noise monitoring documents that ambient levels are exceed 60 dBA at the location of any occupied habitat areas, then the associated construction shall cease and the noise consultant and the qualified biologist shall prepare and submit to the satisfaction of the Development Services Director (or their designee), a noise reduction plan to reduce noise levels to ambient conditions. If there are no alternatives available to reduce the noise levels, then	Final Plans and Specifications; Construction	Construction	City of Chula Vista			

<sup>1</sup> The biologist for this measure should be experienced in bird biology and ecology, preferably with prior experience in identifying bird territories using behavioral cues.

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
the associated construction activities will cease until breeding birds are no longer detected in the area or the end of the breeding season (September 16). The City of Chula Vista will be responsible for implementing restrictions on construction work during the bird breeding season.						
<u>BIO-7:</u> Temporary impacts to waters of the U.S. total 0.014 acre and will be mitigated by restoration of 0.014 acre of waters of the U.S. on-site immediately upon completion of construction. Mitigation ratios for this restoration are shown in Table 3.4-2.	Final Plans and Specifications; Post-Construction	Post-Construction	City of Chula Vista			
<u>BIO-8:</u> Prior to issuance of land development permits, including clearing or grubbing and grading permits for areas that impact jurisdictional waters, the project proponent shall obtain all required regulatory permits, such as those required under Section 404 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter Cologne Water Quality Act. The City of Chula Vista will be responsible for obtaining these regulatory permits.	Pre-Construction	Post-Construction	City of Chula Vista			
<u>BIO-9:</u> Prior to commencement of any construction related activities, a revegetation plan will be developed to address both temporary and permanent impacts, including 0.055-acre of temporary impacts to coastal sage scrub, 0.755 acre of temporary impacts to southern cottonwood-willow riparian forest, and 0.442 acre of permanent impacts to southern cottonwood-willow riparian forest. The revegetation plan will be prepared by a qualified City-approved biologist familiar with the City's MSCP Subarea Plan and the plan will be submitted to the City's Development Services Director (or their designee) for review and approval. The revegetation plan will include, but will not be limited to, an implementation strategy; species salvage and relocation; appropriate plant palette; planting methodology; irrigation requirements; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures including invasive plant species control measures to implement should exotic species become established. The revegetation plan will stipulate that project landscaping will not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. Following the completion of construction	Final Plans and Specifications; Post-Construction	Post-Construction	City of Chula Vista			

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
activities, the restoration plan will be implemented for a minimum of 5 years, unless success criteria are met earlier and all artificial water has been off for at least 2 years. The City of Chula Vista will be responsible for developing and implementing the revegetation plan.						
<u>BIO-10</u> : The limits of project impacts (including construction staging areas and access routes) will be clearly delineated with bright orange plastic fencing, stakes, flags, or markers that will be installed in a manner that does not impact habitats to be avoided and such that they are clearly visible to personnel on foot and operating heavy equipment. This delineation will be conducted under the supervision of the City-approved biologist prior to commencement of construction activities and will remain in place during all construction activities. All temporary ESA fencing will be shown on grading plans and/or associated construction documents. If work occurs beyond the fenced or demarcated limits of impact, all work will cease until the problem has been remedied to the satisfaction of the City's Development Services Director (or their designee). Temporary construction fencing and markers will be maintained in good repair until the completion of project construction and removed upon project completion. The City of Chula Vista will be responsible for clearly delineated the project limits.	Final Plans and Specifications; Pre-Construction	Construction	City of Chula Vista			
<u>BIO-11</u> : A City-approved biologist will be on-site during: a) initial clearing and grubbing; and b) weekly during project construction within 61 meters (m) [200 feet (ft)] of off-site California gnatcatcher and least Bell's vireo habitat to ensure compliance with all conservation measures. The City-approved biologist will be familiar with the habitats, plants, and wildlife in the project area to ensure that issues relating to biological resources are appropriately and lawfully managed. The City of Chula Vista will be responsible for having the City-approved biologist on-site.	Construction	Construction				
<u>BIO-12</u> : Staging areas during construction will be located on property occupied by the Chula Vista Municipal Golf Course east of the existing bridge and outside of the riparian habitat. Construction vehicle access will be limited to those areas absolutely necessary to complete the bridge construction. The City of Chula Vista will be responsible for designating staging areas for construction.	Final Plans and Specifications; Pre-Construction; Construction	Construction				

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
<b>BIO-13:</b> An employee education program will be developed prior to construction. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program prior to working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area (including photographs), their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area. Employees will also be informed on the importance of weed control and the measures needed to minimize their spread. The City of Chula Vista will be responsible for developing the employee education program.	Final Plans and Specifications; Pre-Construction; Construction	Construction				
<b>BIO-14:</b> The project site will be kept as clean of debris as possible during construction. All food-related trash items will be enclosed in sealed containers and regularly removed from the site. The City of Chula Vista will be responsible for ensuring that the construction team keeps the project site clean.	Final Plans and Specifications; Construction	Construction				
<b>BIO-15:</b> Project personnel will be prohibited from bringing domestic pets to construction sites to ensure that domestic pets do not disturb or depredate wildlife in adjacent native habitats during construction. The City of Chula Vista will be responsible for ensuring that domestic pets are not brought on-site.	Final Plans and Specifications; Construction	Construction				
<b>BIO-16:</b> Siltation and erosion control BMPs will be implemented during construction, including boundary silt fencing, gravel bags, fiber rolls, weed-free straw wattles and mulch, and slope stabilization. Runoff from the pavement of the newly constructed bridge and ramps will drain to pervious concrete. Additional siltation and erosion control BMPs to be implemented are described in mitigation measure HYDRO-1. The City of Chula Vista will be responsible for implementing these siltation and erosion control BMPs.	Final Plans and Specifications; Construction	Construction				
<b>BIO-17:</b> All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will occur in designated areas outside of the two branches of the Sweetwater	Final Plans and Specifications; Construction	Construction				



Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
River within the fenced project impact limits during construction. These designated areas will be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering waters of the U.S. and will be shown on the construction plans. Fueling of equipment will take place within existing paved areas or designated fueling areas designed to contain fuel drips and farther than 100 feet from waters of the U.S. Contractor equipment will be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" will be designated on construction plans and/or within the stormwater pollution prevention plan. All equipment will be cleaned prior to utilization in sensitive habitats and all cleared vegetation will be disposed of off-site. The City of Chula Vista will be responsible for implementing restrictions on equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities.						
<u>BIO-18</u> : Impacts from fugitive dust will be avoided and minimized through the application of water or an approved biodegradable dust palliative (e.g., chloride compounds, lignin derivatives, resinous adhesives), reduced speeds on unpaved roads, perimeter erosion and sedimentation controls, revegetation or other measures considered appropriate by the City during construction (see also AIR-1). The City of Chula Vista will be responsible for enforcing fugitive dust control measures.	Final Plans and Specifications; Construction	Construction				
<u>BIO-19</u> : If project lighting is required, a lighting plan / photometric analysis shall be submitted to the satisfaction of the Development Services Director (or their designee) to ensure project lighting (including temporary construction and/or permanent) has been directed away from biologically sensitive areas, wherever feasible and consistent with public safety. The lighting plan shall be developed prior to the commencement of any construction related activities and illustrate the location of the proposed lighting standards and, if applicable, type of shielding measures required to minimize light spillage into the preserve. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and special status species from night lighting. Consideration shall be given to the use	Final Plans and Specifications; Pre-Construction; Construction	Construction				

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
of low-pressure sodium lighting. The City of Chula Vista will be responsible for developing the lighting plan/photometric analysis.						
<b>BIO-20:</b> Cut and fill will be balanced within the project or the construction contractor will identify the source or disposal location prior to construction. All spoils and material disposal will be disposed of properly during construction. The City of Chula Vista will be responsible for ensuring that cut and fill will be balanced and disposed of properly during construction.	Final Plans and Specifications; Construction	Construction				
<b>BIO-21:</b> The City of Chula Vista will notify bidding contractors about the biological resources and constraints associated with the proposed project prior to award of the construction contract.	Pre-Construction	Construction				
<b>BIO-22:</b> The City-approved biologist will submit a final report to the City's Development Services Director (or their designee) within 120 days of project completion including photographs of impact areas and adjacent habitat, documentation that authorized impacts were not exceeded, and documentation that general compliance with all conservation measures was achieved. The report will specify numbers, locations, and sex of California gnatcatchers and least Bell's vireos (if observed), observed California gnatcatcher and least Bell's vireo behavior (especially in relation to project activities), and remedial measures employed to avoid and minimize impacts to California gnatcatchers and least Bell's vireos. Raw field notes should be available upon request by the City of Development Services Director (or their designee). The City of Chula Vista will be responsible for submitting this final report.	Post-Construction	Post-Construction				
<b>Cultural Resources</b>						
<b>CULT-1:</b> If any archaeological resources, paleontological resources, or human remains are discovered during construction, work shall be diverted from the location of the find until a qualified specialist was able to assess the significance and nature of the find. If the find is considered potentially significant, a testing and evaluation program shall be developed and shall include measures for cataloging and curating any potential finds. Implementation of mitigation measure CULT-1 would reduce impacts to a level less than significant.	Final Plans and Specifications; Construction	Construction	City of Chula Vista			

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
Hazards and Hazardous Materials						
HAZ-1: A site and community health and safety plan and worker training shall be implemented for subsurface excavation activities to manage potential health and safety hazards to workers and the public.	Final Plans and Specifications; Pre-Construction; Construction	Construction	City of Chula Vista			
HAZ-2: For project construction activities involving excavation, grading, or other subsurface disturbance, a soil and groundwater management plan shall be prepared and implemented to address the possibility of encountering areas of potential environmental concern. The plan shall be prepared by a qualified environmental consultant and shall be implemented during subsurface disturbance activities by the contractor under the oversight of an environmental professional on behalf of the project proponent. The plan shall address soil and groundwater monitoring, handling, stockpiling, characterization, on-site reuse, export, and disposal protocols. The objective of the plan is to assist the contractor in the excavation, notification, monitoring, segregation, characterization, handling, and reuse and/or disposal (as appropriate) of waste that may be encountered during earthwork activities.	Final Plans and Specifications	Construction	City of Chula Vista			
HAZ-3: Groundwater monitoring wells were not noted to be located within the project area, based on the site reconnaissance or review of regulatory records. However, if wells are proposed to be disturbed during project improvements, the project proponent shall coordinate with the responsible party and/or regulatory agency for the wells to evaluate their appropriate abandonment or relocation.	Construction	Construction	City of Chula Vista			
HAZ-4: Based on the shallow depth to groundwater, the potential impact of contaminated groundwater at the project area should be considered if dewatering activities are planned for the construction of proposed improvements. Dewatering activities may be subject to increased disposal costs or other environmental surcharges (e.g., permitting) as a result of the presence of contaminated groundwater. A discharge permit may be required for dewatering, and water may need to be characterized and treated prior to discharge.	Construction	Construction	National Pollutant Discharge Elimination System; Regional Water Quality Control Board			
HAZ-5: Appropriate worker and community health and safety measures (e.g., dust control, air monitoring, stockpile management) shall be implemented by the contractor, under the oversight of a qualified environmental professional, during	Final Plans and Specifications; Construction	Construction	City of Chula Vista			

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
subsurface disturbance activities in areas suspected of being associated with subsurface contamination.						
<u>HAZ-6:</u> Appropriate references to the potential to encounter contaminated soils and/or groundwater shall be included in construction specifications so that the contractor can consider various factors (e.g., soil disposal, dewatering costs) in their work.	Final Plans and Specifications	Construction	City of Chula Vista			
<u>HAZ-7:</u> Soil and/or groundwater generated during construction activities (e.g., subsurface excavation) may require chemical characterization (e.g., analytical testing) by a qualified environmental professional prior to reuse, export, or disposal. Additional assessment (e.g., sampling of stockpiles) may be warranted to evaluate the nature and extent of impacts to soil and/or groundwater prior to reuse, export, or disposal.	Construction	Construction	City of Chula Vista			
<u>HAZ-8:</u> Further assessment is recommended to be performed by a qualified environmental professional if soil or groundwater suggestive of contamination (e.g., discoloration, odors), or other potential environmental issues are encountered in the project area during project construction activities. If contamination is discovered, regulatory agencies may require additional environmental investigation and/or mitigation to be conducted, particularly if there is the potential to affect public health, safety, and/or the environment. The County of San Diego has requested to be notified if evidence of contamination is discovered to the west of the bridge, within the limits of the SWOMA.	Construction	Construction	City of Chula Vista; County of San Diego Department of Environmental Health			
<u>HAZ-9:</u> Surveys shall be conducted to evaluate the presence and location of potentially hazardous materials such as asbestos-containing materials, lead-based paint, treated wood, and other materials falling under UWR requirements prior to disturbance of infrastructure with potentially hazardous materials. The surveys shall be conducted by California Department of Public Health Certified Lead Inspector/Assessors, California Division of Occupational Safety and Health Certified Asbestos Consultants, and/or other appropriately qualified professionals in accordance with applicable local, state, and federal guidelines and regulations.	Final Plans and Specifications	Construction	City of Chula Vista			
<u>HAZ-10:</u> Prior to removal or demolition of infrastructure with potentially hazardous materials, appropriate abatement measures shall be implemented by a licensed abatement contractor using trained and certified workers and supervisors. Potentially	Final Plans and Specifications; Construction	Construction	City of Chula Vista			

Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Verification of Compliance		
				Initial	Date	Remarks
hazardous materials shall be handled and disposed in accordance with applicable regulations.						
<b>Hydrology and Water Quality</b>						
<u>HYDRO-1</u> : Construction of the proposed project will require implementation of the construction BMPs identified in the water quality technical report prepared for the proposed project (Kimley-Horn and Associates, Inc. 2010), including silt fences, fiber rolls, street sweeping and vacuuming, storm drain inlet protection, stockpile management, solid waste management, stabilized construction entrance/exit, dewatering operations, vehicle and equipment maintenance, de-silting basins, gravel bag berms, sandbag barriers, material delivery and storage, spill prevention control, concrete waste management, waste conservation practices, paving and grading operations to reduce impacts to water quality.	Final Plans and Specifications; Construction	Construction	City of Chula Vista; Regional Water Quality Control Board			
<u>HYDRO-2</u> : All inlets constructed as a part of the proposed project will be marked with the words “No Dumping! Flows to Bay” or similar.	Final Plans and Specifications; Construction	Construction	City of Chula Vista			
<b>Noise</b>						
<u>NOI-1</u> : As required by the Caltrans’ Standard Specification 7-1.011, each internal combustion engine will be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine will be operated on the project without said muffler.	Final Plans and Specifications; Construction	Construction	City of Chula Vista			
<u>NOI-2</u> : Staging areas should be located at least 500 feet from occupied residential units. Work in staging areas that generate loud noises, such as equipment maintenance, shall not occur between the hours of 10:00 p.m. and 7:00 a.m., Monday through Friday, or between the hours of 10:00 p.m. and 8:00 a.m., Saturday and Sunday, per the City of Chula Vista Noise Ordinance (17.24.040).	Final Plans and Specifications; Construction	Construction	City of Chula Vista			
<u>NOI-3</u> : If traffic control and construction signs that require power for lighting or flashing are located near residential units, the source of power shall be batteries, solar cells, or another quiet source. Gas- or diesel-fueled internal combustion engines should not be used.	Final Plans and Specifications	Construction	City of Chula Vista			
<u>NOI-4</u> : Pile driving and explosives blasting will be restricted to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and will not be allowed on Saturdays, Sundays, or holidays, per the City of Chula Vista Noise Ordinance.	Final Plans and Specifications; Construction	Construction	City of Chula Vista			